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FAMINES, EARTHQUAKES, PLAGUES:
NATURAL DISASTERS IN OTTOMAN SYRIA
IN THE WRITINGS OF VISITORS

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In an article on medieval hospitals, Miri Rubin explained that documents discussing such institutions only rarely allow one a peek into a hospital's day-to-day life. The historian could nonetheless imagine that life by employing fragments of testimonies in an unconventional manner, and by recognizing the 'language' of hospitals and charity prevailing at the time.¹ The problem outlined by Rubin exists for the study of natural disasters in the Ottoman Empire as well. While famines, earthquakes, and plagues are sometimes mentioned, one seldom comes across evidence on the influence such calamities had on diurnal experiences of the inhabitants of cities. And following Rubin's suggestion, one can combine an array of sources to reconstruct them. This study will deal with one type of sources – works and documents by visitors – and its unique contribution to the understanding of the social implications of natural disasters. I chose to focus on Syria, one of the least studied areas of the Ottoman Empire. In the seventeenth and eighteenth centuries, that region had been afflicted with famines, earth-

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¹ Miri Rubin, "Imagining medieval hospitals: considerations on the cultural meaning of institutional change" in: Jonathan Barry and Colin Jones, eds., *Medicine and Charity Before the Welfare State*, (London: Routledge, 1991), pp. 14-25.

quakes, plagues, fires, and severe weather so often, it affected almost everyone and became an inseparable part of one's world. To understand Ottoman urban society, then, requires a more comprehensive study of natural disasters.

First, one has to define what writings by visitors are. These include travelogues written by Europeans who had passed through either Damascus or Aleppo, and provided a description of their encounters there.² Accounts written by missionaries and European merchants and diplomats who served in the region for years or even decades also belong here. One would argue that the perspective of travelers differed from that of long-time residents. Foreigners had very limited exposure to a city's daily routine while sojourning there. They described what they saw, as well as stories they heard from others. Their sources were usually local Christian and Jews who were rather educated and could speak their language, and who were not always representative of the perspective of the multitude, who only spoke Arabic or Turkish. The reliability of their assessments on local practices was often dubious, as the sources were either not stated, or of disreputable nature. Merchants or diplomats, on the contrary, dwelt in the region long enough to be acquainted with its customs. Many spoke Arabic and Turkish, had connections with locals, and visited their homes frequently. Their writings indeed tend to elaborate on daily affairs more than those of travelers. But there were boundaries that even an experienced and well-informed foreigner could not cross. Patrick Russell spent twenty-one years in Aleppo as the physician of the British Factory. He was fluent in Arabic, personally acquainted with the pasha, dressed as a local and treated people of all ranks

² There were also a few travelers from the Ottoman Empire itself who visited Syria in the seventeenth and eighteenth centuries. Although I have not scrutinized them for the purpose of this study, my initial impression is that their contribution to one's understanding of natural disasters is marginal. See, for example, Evliya Çelebi, *Evliya Çelebi Siyahatnamesi*, (Istanbul: Devlet Matbaası, 1935), vol. 9 (Anadolu, Suriye, Hicaz), pp. 350-383, 521-590 for Aleppo and Damascus, respectively. I chose Damascus and Aleppo as most reports for Syria in the period under study relate to either city.

and communities.³ And yet even he admitted to having no information on some communal practices.⁴ The problem of accessibility was therefore shared, to a different degree, by all foreigners. They also had one other common characteristic, which enables the historian to classify them under one roof: they were critical, at least to some degree, about their experiences in the East, constantly judging ordinary customs and comparing them to what they saw elsewhere or to the social values of their places of origin.⁵ They offered yet another perspective on affairs that were often mentioned in local chronicles or Ottoman documents.

That reports by foreigners are an invaluable source for the study of natural disasters in the Ottoman Empire has been suggested by a few historians. Daniel Panzac studied the plague in the Ottoman Empire in the eighteenth and nineteenth centuries. While using a few Arab and Turkish chronicles, he based his study primarily on French consular reports and travelogues. In his book, Panzac documented earthquakes, famines, droughts, fires, floods and plagues that occurred in the Ottoman Empire from 1700 to 1850. He then studied the demographic and economic implications of calamities.⁶ In a recent study on Bursa, Heath Lowry devoted a chapter to natural disasters, as reported by travelers who passed through the city. He presented evidence for the occurrence of fires, plagues and other epidemics,

³ G. S. Boulger, "Patrick Russell (1727-1805)" in: *Oxford Dictionary of National Biography*, online edition

⁴ Describing Jews in Aleppo, Russell avowed that "I have frequently observed the Jews... walking to the Synagogue; but may say... that of the rites performed within doors, I am perfectly ignorant." Alexander Russell, *The Natural History of Aleppo*, (London: G. G. and J. Robinson, 1794), vol. 2, pp. 71-72.

⁵ In his study on earthquakes in the Ottoman Empire, Jean Vogt grouped foreign residents in the East and visitors under one category of sources, distinguishing them from local or official Ottoman documents. Jean Vogt, "Sismicité historique du domaine Ottoman: types de sources occidentales et exemples de témoignages" in: Elizabeth Zachariadou, ed., *Natural Disasters in the Ottoman Empire*, (Heraklion: Crete University Press, 1999), pp. 15-53.

⁶ Daniel Panzac, *La peste dans l'Empire Ottoman 1700-1850*, (Leuven, Belgium: Peeters, 1985). He elaborated on his choice of sources on pp. 17-28.

and earthquakes. From some of the quoted testimonies one can learn about the mayhem and devastation natural disasters created.⁷

Another way to emphasize the importance of the writings of visitors is to examine what other sources can or cannot offer. Looking at earthquakes in the Ottoman Empire, Ambraseys and Finkel searched through Ottoman documents for evidence of earthquakes that took place in the Balkans. Out of about 500 earthquakes documented elsewhere, only 41 were mentioned in the Ottoman sources they surveyed. They did not, however, provide the essential details interesting a social historian. The information was generally limited to reports on public buildings that collapsed and the funds necessary to restore them.⁸ With these findings, the authors doubted whether “the retrieval of earthquake-related material from Ottoman sources... is cost effective.”⁹ Ambraseys and Finkel suggested the *qāḍī* court records as another Ottoman source, where information on earthquakes and other disasters might be found. But they have not studied the *sijilāt* themselves, as those for the Balkans were lost.¹⁰ Looking at the court records of sixteenth-century Trabzon, Ronald Jennings found testimonies on deserted *ḥamāms* located in neighborhoods lay waste by the plague. But he found very few indications for the seventeenth century.¹¹ For Syria, the only social-history study using *sharḥī* court records extensively is Abraham Marcus’ book on Aleppo, but its section on the plague and other calamities is based entirely on foreign observations.¹²

⁷ Heath Lowry, *Ottoman Bursa in Travel Accounts*, (Bloomington, IN: Indiana University Press, 2003), pp. 71-84.

⁸ N.N. Ambraseys and Caroline Finkel, “Unpublished Ottoman archival information on the seismicity of the Balkans during the period 1500-1800” in: Zachariadou, pp. 89-107.

⁹ *Ibid.*, p. 91.

¹⁰ *Ibid.*, p. 90.

¹¹ Ronald Jennings, “Plague in Trabzon and reactions to it according to local judicial registers” in: Heath Lowry and Donald Quataert, eds., *Humanist and Scholar: Essays in Honor of Andreas Tietze*, (Istanbul: Isis Press, 1993), pp. 27-36.

¹² Abraham Marcus, *The Middle East on the Eve of Modernity: Aleppo in the Eighteenth Century*, (New York: Columbia University Press, 1989), pp. 253-260 and notes on pp.

Wondering whether Ambraseys and Finkel's conclusion on Ottoman documents holds for Syria as well, I went to look for information on earthquakes and other natural disasters in the Ottoman Archives in Istanbul (*Başbakanlık Osmanlı Arşivi*). I chose three periods of four to five years in eighteenth century Damascus and Aleppo, during which various natural catastrophes are known to have occurred: 1718-1723, 1742-1746 and 1757-1762¹³ For those years, I surveyed the *Mühimme Defteri* registers, as well as their two spin-offs, *Şikayet Defteri* (begun in 1649) and *Ahkam Defteri* (from 1742, with an individual series for each province). Being records of complaints sent from the provinces to Istanbul, one would expect to find in them traces of the hardships denizens of Damascus or Aleppo were experiencing. And while I have not studied all the registers for the selected years,¹⁴ a clear pattern emerges: the consequences of- and responses to natural disasters are hardly ever discussed. When such calamities are mentioned, the registers merely report their occurrence and the need to assist those afflicted by it. For example, one learns that in the year 1745 the province of Aleppo suffered from famine, owing to problems with wheat supply. But one is not given any details on the period of time this famine lasted, or the effect it had on the inhabitants of the province.¹⁵ In another case, slightly more information is provided about a famine in Syria in 1724, which caused many yeomen to abandon their villages and head toward

374-376.

¹³ A list of events by year and city is found in: Panzac, pp. 30-35.

¹⁴ The *defter*s examined were: 1. *Mühimme Defteri* (MHM), 130, 1720-22; 131, 1722-23; 132, 1723-25; 133, 1725-26; 150, 1743-44; 151, 1744-45; 152, 1745-47; 161, 1758-59; 162, 1759-63. 2. *Şikayet Defteri* (ŞKT), 56, 59, 60, 100, 104, 105, 171, 172, 173, for which I do not have exact dates. 3. *Ahkam Defteri*, Şam-i Şerif, 1, 1742-54; 2, 1754-64. 4. *Ahkam Defteri*, Halep, 1, 1742-51; 2, 1751-62. Some of the registers cover dates within a few years after disasters took place. This was done out of an assumption that it might take some time for an event to be reflected in the documents.

¹⁵ Başbakanlık Osmanlı Arşivi (BOA), Halep Ahkam, 1, p. 187. For Ottoman documents I provide page, entry or image numbers, according to the system used by the archives for that specific register.

Damascus.¹⁶ But the appearance of this incident is the exception rather than the rule. Generally, the above-mentioned Ottoman registers do not contribute much to the understanding of daily life in times of catastrophes. I found this assumption to hold for earlier periods as well.¹⁷

Nonetheless, there is one type of document found in the Ottoman Archives that sheds more light on natural disasters. Events discussed in the *Maliyeden Müdevver* revolve around the monetary implications of such calamities, including the damage caused to property or people. And although entries in the *Maliyeden Müdevver* do not usually go into great detail,¹⁸ it is still an invaluable resource for the Ottoman perspective on natural disasters. Thus, in a document from December 1728, one is told about a famine, which spread through Antioch, Aleppo, and its surrounding countryside as a result of a locust attack. To alleviate the situation, 30,000 *akçe* were allocated to import 1,000 sacks of wheat to the region from Selanik and other towns, through the port of Iskenderun.¹⁹ From the *Maliyeden Müdevver* one can also learn about the Ottoman treatment of victims of such disasters. A report from June 1672 tells the story of about 500 houses of the poor in Damascus, which had been deserted for several years. Their inhabitants became homeless because these houses were destroyed, possibly by an earthquake or a fire. The document petitions the Sultan to relieve those poor of the *avarız*

¹⁶ BOA, MHM, 132, entry 196.

¹⁷ I sampled MHM 7, 1567-68; 12, 1570-71; 44, 1580-84; 73, 1594-95; 82, 1617-18; 83, 1626-27; 84, 1628-30; and ŞKT 1, 1649-50; 2, 1652; 3, 1655-58; 4, 1661-62. Accounts of natural disasters appear only sporadically throughout these records. The great majority of the reports I came across dealt with famine, often caused by political rather than natural factors, the entries being orders from the Sultan to resolve the situation. An exception is a list of the buildings destroyed in an earthquake in Görice, followed by a sultanic decree to reconstruct them all without interference; MHM 12, entry 615.

¹⁸ I came across one case where a situation was discussed in depth and great detail. This is *Maliyeden Müdevver* (MAD) 3160, images 1-20, which deals with the earthquake that shook Damascus in the winter of 1759-1760. This document includes an account of the buildings and houses demolished. It is yet to be studied.

¹⁹ BOA, MAD, 10319, p. 27.

tax, a request which he complies with.²⁰ A similar exemption from taxes was given in 1652 in Üsküp, where many houses had been deserted for a few years due to a plague epidemic.²¹ But it appears that an account of the actions the Ottomans were taking is the most one can expect from these registers. Up to this point, I have not been able to find documents that allow one to penetrate into the 'private' level, to perceive what it meant to live in a period when natural disasters could occur repeatedly in one's lifetime.

Believing that documenting daily life in Syrian cities under the shadow of a famine or the plague is still accomplishable, I turned to look for natural disasters in the writings of locals. Studying several Arab chronicles and treatises, I was able to find more 'personal' accounts of events, even though these were usually of meager length. The oft-quoted chronicle of Aḥmad al-Budayrī, describing Damascus in the mid-eighteenth century, documented many such incidents. In the winter of 1741-1742 there was a severe cold that destroyed crops. The dearth of some staples caused prices to double or even quadruple, and for many people to remain without the means to purchase food.²² In 1743 the city was stricken by the plague, but al-Budayrī devoted only one paragraph to discuss its consequences. He told the story of an *imām* and his son, who had died of the plague within a few hours of each other. Concluding the story, he explained that "the plague showed its first signs at the beginning of winter... and continued with great intensity till the beginning of the fall."²³

Quite similar descriptions appear in another chronicle from the early eighteenth century, where one learns about the damages caused by severe weather, earthquakes, floods, fires and the plague. The author tells of the public role victims of the plague used to play in their community, from

²⁰ BOA, MAD, 14709.

²¹ BOA, MAD, 14680, pp. 3, 8.

²² Aḥmad al-Budayrī al-Ḥallāq, *Ḥawādith Dimashq al-yawmiyyah*, (Cairo: al-Jam'iyah al-Miṣriyyah, 1959), pp. 10-11, 25-26.

²³ *Ibid.*, p. 56.

which one can earn a perspective on the number of people each death affected.²⁴ From reading the chronicle one gets the impression that epidemics were taken quite seriously by the inhabitants of Damascus. At one point in 1712, a class was given at a *madrasah* in town on diseases and how to prevent them.²⁵ The kind of advice given in such conventions was probably of the type transmitted orally from one generation to another, often recorded in treatises on the plague. These reflected the general beliefs and common customs related to epidemics, and included prayers and other superstitions, such as drawing special symbols on one's windows; hanging internally-divided rectangular tables, with letters and other symbols jotted within each column, above one's door; and writing on it the name of the Prophet several times.²⁶ The advice given in them can help one understand the notions that existed in Islamic society about the plague and other epidemics.

But while offering an important internal perspective, local Arab sources suffer from several major problems. Chronicles, as well as personal accounts by visitors, represent the outlook of one man, their author. This is a universal hurdle that can be at least partially overcome by juxtaposing several sources that deal with the same set of events. Another difficulty involves quantitative data. One could not accurately assess the number of inhabitants in a city, a quarter, members of a certain community, or houses demolished in an earthquake. When providing estimated figures, local authors seem to have been considerably less cautious than visitors.²⁷

²⁴ Muḥammad b. Kannān al-Ṣāliḥī, *Yawmīyāt Shāmīyah*, (Damascus: Dār al-Ṭabbā, n.d.), pp. 54, 103, 184 (severe weather); 101, 197 (earthquakes); 158 (flood); 185 (fire); 61-66, 140, 151, 184-185 (the plague).

²⁵ *Ibid.*, pp. 196-197.

²⁶ Aḥmad b. Muḥammad al-Ḥanawī, *Risālat al-durr al-maknūn fī al-kalām 'alā al-ṭā'ūn* (before 1686), MS Baġdatlı Vehbi 2105, Süleymaniye Kütüphanesi, Istanbul, pp. 9-18; Anonymous, *Ḥulāṣat ma taḥaṣṣala 'alayhi al-sā'ūn fī adwiyat daf' al-wabā wal-ṭā'ūn* (1620), MS Esad Efendi 3567, Süleymaniye Kütüphanesi, Istanbul, pp. 2-19.

²⁷ Arab authors generally did not provide numerical figures, but rather broad estimations, such as: "people died in great numbers" or "in the provinces [of the city] many died." Mikhā'īl Burayk al-Dimashqī, *Tā'rikh al-Shām*, (Damascus: Dār Qutaybah, 1982), p. 81;

Moreover, when Arab authors wrote about the familiar, day-to-day setting in which they had grown up, they naturally tended not to relate to details or practices that seemed too obvious to mention. From reading Arab chronicles, for example, one does not get a description of a city and its streets and houses, let alone the presence of sidewalks on major streets – a feature mentioned in the works of several travelers.²⁸

That Arab sources omit ‘insignificant’ information poses a quandary for the social historian interested in natural disasters, who is specifically looking for those too-obvious-to-mention aspects of daily life. In this respect, the works of visitors complement the picture with missing details. First, they promote a clearer assessment of the ways natural disasters impinged on the demography of Ottoman urban society, mainly for their cagey estimates of lives lost. In addition, they enable one to understand how people protected themselves against catastrophes before and after they happened. As the plague and other epidemics were by far more common than other natural disasters,²⁹ one reads many reports on the treatment people sought when becoming sick, the medical options available to them, and the functioning of a city in times of pestilence. From this, one can try to portray daily life during crises.

The demographic changes caused by natural disasters, and the plague in particular, were studied by Daniel Panzac. In his book, he appraised the percentage of population extinguished in several plague attacks throughout the eighteenth century. Compared with the casualties the plague claimed in Europe in the early modern period, in outbreaks of the epidemic in the Ottoman Empire the mortality rate exceeded an approximate 20% in very

al-Ṣāliḥī, p. 101.

²⁸ See for example: Cornelis de Bruyn, *A Voyage to the Levant*, (London: Jacob Tonson and Thomas Bennet, 1702), pp. 238-239; Richard Pococke, *A Description of the East and Some Other Countries*, (London: W.Bowyer, 1743-45), p. 118.

²⁹ Marcus, pp. 253-260.

few cases.³⁰ Thanks to the extensive study on the plague conducted by Patrick Russell, Panzac was able to reconstruct the number of plague victims per month in Aleppo during 1761-1762. Russell's reports were considered relatively reliable, as he had not only repeatedly questioned their accuracy, but also employed body washers and undertakers at the city's cemeteries as his informants.³¹ His brother Alexander, who wrote about the plague of 1742-1744, did not disclose his sources, but estimated the percentage of deaths to be about the same.³²

The contribution of the writings of visitors to the study of natural disasters in Syria is not limited to numerical data, of course. They offer one a greater understanding of the preparedness of urban society to confront catastrophes. For example, buildings were generally ill-prepared to sustain earthquakes, even though these occurred a few times in one's lifetime.³³ Houses were made of hewn stones, clay hardened by the sun, or even simply mud,³⁴ even though materials were probably available to build more formidable houses.³⁵ And since maintenance and renovation was not

³⁰ Panzac calculated the inhabitants of Aleppo to amount to about 150,000 throughout the eighteenth century, see pp. 339-366. But if the figures of d'Arvieux, who was the French consul to Aleppo in the 1680's are used, the percentage of those affected drops to no more than 15% of the population. D'Arvieux counted the number of houses in each neighborhood in the city, from which he deduced that the city had approximately 285,000 inhabitants. D'Arvieux, *Mémoires du Chevalier d'Arvieux*, (Paris: Charles Jean Baptiste Delespine, 1735), vol. 6, pp. 434-439.

³¹ Patrick Russell, *A Treatise of the Plague*, (London: G.G.J and J. Robinson, 1791), pp. 32, 42, 48, 53-54, 58.

³² Russell, Aleppo, vol. 2, pp. 340-356.

³³ In Syria and Palestine in the eighteenth century, earthquakes occurred in 1705, 1717, 1719, 1723, 1726, 1746, 1753, 1756, 1759, 1761, and 1783. Panzac, pp. 31-33.

³⁴ Henry Maundrell, *A Journey from Aleppo to Jerusalem at Easter A.D. 1697*, (Oxford: The Theater, 1703), p. 123; Bruyn, *ibid.*; Egmond van der Nijenburg, *Travels Through Part of Europe, Asia Minor, the Islands of the Archipelago; Syria, Palestine, Egypt, Mount Sinai, etc.*, (London: L. Davis and C. Reymers, 1759), vol. 2, p. 246, 253-254; Charles Thompson, *Travel Through Turkey in Asia, the Holy Land, Arabia, Egypt, and other parts of the world*, (London: J. Newbery, 1754), Vol. 1, p. 140.

³⁵ Maundrell, *Ibid.*

performed regularly,³⁶ many residences were in ruinous condition.³⁷ This resulted in occasional crumbling of houses, killing or injuring their inhabitants.³⁸ These descriptions were confirmed by eighteenth century drawings of both cities, as well as by photographs from a century later.³⁹

Precautions against famine, taken by locals, were generally not noticed by foreigners. Al-Budayrī observed several instances of people storing provisions for long periods of time. From the bedlam that aroused after each discovery of such deeds, one learns that the norm, like in times of earthquakes, was to do nothing and expect God and the authorities to take care of the people.⁴⁰ This reality was reflected in the works of locals, yet I could not find evidence for it in the writings of visitors. This could possibly be explained by the limited effect famines had on foreigners. When prices went up due to dearth of provisions in the markets, the average person in Damascus and Aleppo could perhaps no longer purchase them, but foreigners, who were well aware of the situation, were usually better off. One can deduce this from travelers' comments on the political causes of famine and its consequences, and the track foreign merchants kept of prices of goods.⁴¹

³⁶ Egmond, vol. 2, p. 335.

³⁷ Henry Teonge, *The Diary of Henry Teonge*, (London: William Brendon, 1927), p. 161.

³⁸ For example, in 1683 a house collapsed burying seven Armenians, six of which were killed. Bruyn, p. 240; see also Al-Budayrī, p. 139.

³⁹ A drawing of Damascus in 1714 appears in Paul Lucas, *Voyage du sieur Paul Lucas fait en MDCCXIV*, (Amsterdam : Steenhouwer & Uytwerf, 1720), p. 246; for an eighteenth century drawing of Aleppo see Russell, Aleppo, inner front binding of vol. 1; for nineteenth-century photographs of Damascus see: Badr al-Ḥajj, *Dimashq: ṣūwar min al-māḥi 1840-1918*, (London: Fūlyūs, 2001), pp. 63-79.

⁴⁰ Al-Budayrī, pp. 49-50, 64-65. Al-Budayrī talks with great contempt about those who stored provisions at a time others could not afford to purchase bread at the markets. The first case he referred to ended with those suspected of storing sacks of flour committing suicide. Throughout the work, incidents of supply shortages in the markets or sharp price rises were accompanied by complaints submitted to the pasha or *qāḍī* – the individuals seen as responsible for fixing bread prices and the general well-being of the people. See pp. 41, 52, 63-64, 73-74.

⁴¹ Pedro Teixeira, *The Travels of Peter Teixeira from India to Italy by Land*, ([London?],

The question of preparedness had greater validity when the plague and other epidemics were concerned. It determined the ways inhabitants of cities coped with prolonged crises, which directly or indirectly affected the entire population. Traditionally, the inhabitants of Damascus and Aleppo took no action to prevent their exposure to diseases. When the plague raged through the city, most people did not alter their daily routines. One reason was a popular belief that the plague and diseases in general were an act of God. Another was the lack of medical knowledge about the ways epidemics spread and inadequate intervention to circumscribe them.⁴² But this did not mean that Damascenes or Aleppines did not dread the appearance of an epidemic in their city. In Aleppo rumors about the frequency of the plague, the probability of its appearance and the towns from which it reached the city were constantly circulating among locals.⁴³ The presence of the plague in the city was a matter generally concealed as long as possible.⁴⁴ From the seventeenth century, this practice had economic implications, as a discovery of the plague would drive Europeans and many other merchants into confinement. In addition, commerce with Europe was halted the moment one case of the plague had been confirmed. Ships could not sail without valid health certificates signed by a consul, and even when carrying the appropriate documents could be refused entry to ports on the way.⁴⁵ The fear of discovering the plague was quite imminent, as shown by the following story. In 1772, a tradesman wanted to send off merchandise from Aleppo via a British ship docked in Iskenderun. While applying for a health certificate,

[1710?]), p. 71; W. G. Browne, *Travels in Africa, Egypt and Syria*, (London: T. Cadell Junior and W. Davies, 1799), pp. 385-388. See also tables of prices in Aleppo for the years 1662-1715 maintained by the Levant Company: The National Archives, London (NA), State Papers (SP), 110/67.

⁴² Russell, *Aleppo*, vol. 2, pp. 303-304.

⁴³ *Ibid.*, 335-337.

⁴⁴ Russell, *Plague*, pp. 60-61.

⁴⁵ Two British vessels coming from the Levant were refused entry to the port of Sicily in 1720; NA, SP 89/28. Certificates of health were issued by the consul to the captain of a ship. See for example a certificate from the 1750's in NA, SP 100/74/1.

the consul informed him of rumors of the plague appearing in the city. He refused to sign the bill till the matter was clarified. At the same time, a Jewish woman broke out with intense fever and there was fear that she was infected with the plague. The woman was visited by several doctors, who could not agree on the nature of her disease, and were chary of announcing that it was indeed the plague. The women eventually recovered, but the European consuls in the city were all reluctant to grant the merchant the desired certificate.⁴⁶

Despite consular efforts, epidemics broke out quite often. They proliferated through a city's neighborhoods, debilitating the ability of many to work and inciting others to look after their bedridden relatives. Observations of foreigners reveal the general attitude toward treating the sick. Hospitals continued to exist in both cities throughout the seventeenth and eighteenth centuries, yet they did not serve the same purpose as they do today. Hospitals provided services to the mentally insane, lepers, the poor, and other visitors who had no place else to stay.⁴⁷ A study on hospitals in western Anatolia presented similar findings.⁴⁸ In general, therefore, people who became sick remained at home, where they were catered to by family members, servants, and sometimes visited by a physician. Lacking sufficient medical knowledge, most people were treated by traditional methods transmitted from father to son, such as using fire to treat wounds; staying inside or outside to cool or heat the body as needed; and drinking water. Many refused to ask for the help of an apothecary, arguing that God is the true medicine.⁴⁹ In times of wide-spread epidemics, even those who were lucky to be visited by a European physician could not always be saved. The plague

⁴⁶ NA, SP 100/74/1

⁴⁷ Teixeira, p. 69; Egmont, vol. 2, p. 251 ; Pococke, pp. 121-122 ; John Green, *A Journey from Aleppo to Damascus*, (London: W. Mears, 1734), pp. 41-42.

⁴⁸ Miri Shefer, "Hospitals in the three Ottoman capitals: Bursa, Edirne & Istanbul in the sixteenth and seventeenth centuries", PhD thesis, Tel-Aviv University (in Hebrew), 2001, pp. 40-64.

⁴⁹ D'Arvieux, *Mémoires*, vol. 3, pp. 332-333.

had no known cure, and aside from bleeding and applying certain medications to ease the pain and reduce fever, a physician could only observe the patient, who either recovered or died within a few hours or days of the first symptoms of the disease.⁵⁰ Some Europeans, although required by their consuls to be quarantined in their residences, tried to extend as much assistance as possible. This included not only offering medical attention, but also dispensing charity money; visiting the sick at their beds; cleansing residences of the deceased; washing their bodies; and interring them. A horrifying description of the plague of 1719 given by a French priest demonstrates the attempts of Europeans to alleviate the miseries of locals. "The city of Aleppo... was constantly afflicted with a violent plague from March to September of 1719... The popular opinion is that at least 120,000 souls have died in Aleppo... The terror was so great and universal, that the number of sick was equal to that of the healthy who came to us for confession. They were at our doors day and night asking for our assistance. Catholics, heretics, Franks, rich and poor turned to us equally. What a sad spectacle... we would find in one room four or five sick people, with only one person to attend them, the lives of all being at risk. I was often obliged to lie between two of the sick to listen to their confession, during which their lips would touch my ears, so I could hear their dying voices. After they died... a few missionaries practiced the charity of washing their bodies and their homes, which were terribly infected... then they would carry the bodies to the common cemetery, bury them, and return to get more bodies. Poor workmen [who became sick] could not work and were in great need, [for which charity was provided by rich French and English merchants]."⁵¹

The examples cited thus far show the importance of the writings of visitors to the study of natural disasters in Ottoman Syria. Their contribution

⁵⁰ Patrick Russell provided an account of 120 plague cases he was involved in. Most patients treated by him or other doctors died. Russell, *Plague*, appendix pp. 1-127

⁵¹ *Lettres édifiantes et curieuses, écrites des missions étrangères: mémoires du Levant*, (Lyon : J. Vernarel, 1819), vol. 1, pp. 100-101.

to a historian's perception of daily life is most emphasized when one looks at an entire period, when natural disasters occurred one after the other. Such was the chain of calamities that began in 1756 and continued into the second half of the 1760's. The winter of 1756-57 was "uncommonly severe" all over Syria. Plants, trees and harvests froze, and the British in Aleppo measured below-freezing temperatures indoors.⁵² In the summer of 1757 prices of grains rose steeply, and provisions became even harder to get as the summer ended and winter approached. According to Patrick Russell, from December 1757 till the following June, the entirety of Syria and adjacent regions "suffered all the miseries of extreme famine." During the same time, a new malignant petechial fever spread throughout Syria, and along with the famine, claimed many lives.⁵³ The Europeans residing in Syria were only slightly affected by the famine, but locals who worked for them were sometimes desperate for a piece of bread. Consequently, a former cook for the Levant Company in Aleppo, who had been on the verge of starvation, was sent to Latakia with a letter of reference, hoping to find a job that would put bread on his table.⁵⁴ During 1759, when the land was beginning to recover from the famine and epidemic, visitors could have gotten the impression that day-to-day life was going on as usual. Especially fascinating were the descriptions of people entertaining themselves at coffeehouses in close proximity to main streets that lay deserted after their inhabitants either perished or fled.⁵⁵

⁵² Russell, *Plague*, p. 9; His accounts were confirmed by a local observer for Damascus: Al-Dimashqī, *Tā'rikh al-Shām*, (Damascus: Dār Qutaybah, 1982), pp. 48-49.

⁵³ A petechial fever is accompanied by purplish spots on the skin. Russell, *Plague*, *Ibid.*; There were other sources contributing to the dearth of basic staples, such as the arrival of a new governor to Damascus, who ordered his people to plunder the city for several days. Then bread became scarce and people started to die of hunger. Al-Dimashqī, pp. 62-64, 80.

⁵⁴ John Brandon Kirkhouse To George Barron, March 18th, 1758, NA, SP 100/74/4.

⁵⁵ Compare a description of a coffeehouse on the banks of the Baradī river from 1734 Damascus given in Thompson, vol. 1, p. 144, to that of Egmont from 1759, probably of the same place; vol. 2, pp. 249-250. A photograph of a similar, possibly even the same coffeehouse from 1895 is found in Badr al-Ḥajj, p. 180.

The next phase came in October 1759, with the first in a series of earthquakes, which shook Syria, Palestine and Egypt.⁵⁶ While that earthquake brought down many houses in Damascus, it was only slightly felt in Aleppo. This was not so with the second convulsion, which took place on the 25th of November, and caused considerable damage in Aleppo as well.⁵⁷ In a letter to his brother in London, Patrick Russell explained that the first earthquake “occasioned little alarm among the natives, and even with the Europeans was the topic only for a day. But the subject was soon revived by letters from Damascus, where the same shock... had done considerable damage.” People in Aleppo began to fear that a similar fate expected them. But the series of shocks, which occurred between the 25th and 28th of November, razed only a few old houses. In Damascus, however, “one-third of the city was thrown down, and of the people, numbers yet unknown perished in the ruins. The greater part of the surviving inhabitants fled to the fields, where they still continued, being hourly alarmed by slighter shocks, which deterred them from entering the city, or attempting the relief of such as might yet be saved, by clearing away the rubbish.” Russell received a report that 20,000 had lost their lives, but argued that “in circumstances of such general horror and confusion, little accuracy can be expected.”⁵⁸ Another account of the earthquakes estimated that more than half of Damascus was destroyed, and that the death toll was in the thousands.⁵⁹

No sooner had the earthquakes abated than the plague arrived on the shores of Syria. Thomas Dawes, the almoner of the Levant Company in Aleppo, reported on January 3rd, 1760 that “the magistrates of health with

⁵⁶ Russell reports the first earthquake to have taken place on October 30th. See: Russell, *Plague*, *Ibid.*; al-Dimashqī described the earthquake to have occurred at night between the 18th and 19th of October. See pp. 78-80.

⁵⁷ Russell, *Plague*, p. 10.

⁵⁸ Patrick Russell, “An account of the late earthquakes in Syria: in a letter from Dr. Patrick Russell, to his brother, Alexander Russell”, *Philosophical Transactions (1683-1775)*, Vol. 51 (1759-1760), pp. 529-534.

⁵⁹ Thomas Dawes to C. Lyttleton, January 3rd, 1760; British Library (BL), Stowe MS 754, vol. 3, fol. 43-44.

great reason make use of the strictest precaution against the Plague.”⁶⁰ The first documented case of a person dying of the plague took place on January 10th in Tripoli. At this point there were rumors of the plague appearing in remote parts of the city of Aleppo, but most people were still optimistic that it would not spread. In Tripoli and other coastal cities, the plague was already progressing, and by the beginning of February, the Europeans were making preparations for confinement.⁶¹ On February 9th, a traveler who arrived in Acre observed great devastation and desolation, and was himself put in isolation and could converse with the locals only through a high window.⁶² But in Aleppo people were still not alarmed, arguing that “no desertion of birds had been hitherto observed, nor mortality among the cattle... frogs were not less vociferous, nor swarms of insects more numerous than in other years” – all considered by locals to be preliminary signs of the plague.⁶³ And even though Europeans were taking precautions, such as storing provisions or leaving the city,⁶⁴ most inhabitants of Aleppo continued with their daily routines. Dawes ascribed this behavior to Islamic law, which “prohibits its infatuated followers to take any precautions against this scourge of the All mighty... [thus] the communication with infected persons or places is never stopped, in consequence of which the contagion spread daily, and seemed to be making regular approaches to Aleppo.”⁶⁵ As the plague was believed to be extirpated in intense cold or hot weather, and

⁶⁰ Ibid., fol. 43.

⁶¹ Russell, *Plague*, p. 11

⁶² Giovanni Mariti, *Travels through Cyprus, Syria, and Palestine*, (London: G. G. J and J. Robinson, 1791-92), vol. 1, pp. 283-284.

⁶³ Russell, *Plague*, p. 15.

⁶⁴ Europeans were retiring to neighboring villages as a precaution against the plague every summer, even when there were no signs of the plague. Egmont, vol. 2, p. 341. Another testimony suggests that Europeans would return to the city when the “heat begins to be violent”, as they believed it killed the plague. Dawes to Lyttleton, July 19th, 1764, BL, Stowe MS 754, vol. 3, fol. 124. Many Jews adopted this practice as well; Josiah b. Joseph Pinto, *Sefer nivhar mi-kesef: she’elot u-teshuvot ‘al seder arba’ ħurim*, (Aleppo: A. Sasson, 1869), p. 125.

⁶⁵ Dawes to Lyttleton, March 1st, 1761, BL, Stowe MS 754, vol. 3, fol. 84.

as April and May were particularly warm, there was a general assumption that the plague was receding.⁶⁶ In early May, caravans of merchants were still arriving from Damascus and Latakiyya, both plague-stricken areas. Russell tracked the spread of the plague, carried into the city by three merchants from Damascus. They stayed in one of the city's khans, and set out after a few days. The porter of the khan, and his son and brother all became sick right after the merchants' departure, and the son died within three days. On visiting the two brothers a few days later, Russell determined that they were indeed sick with the plague, but delayed his announcement in another day, being aware of the consequences of the presence of the plague in the city. The news of the plague, along with the appearance of new cases in the khan's vicinity, still did not bring about a change in popular behavior. At the end of May, another caravan arrived from Damascus. Its members were not let into the city for political reasons, and camped in the suburbs. A few residents of Aleppo found their way back in, even though many of them were already carrying visible signs of the disease. As a result, remote neighborhoods were greatly afflicted by the plague, but the city itself saw at first only a few cases.⁶⁷ By the beginning of June, people were already seen dying in the streets, and Europeans contended that it was not safe to come into contact with locals.⁶⁸ Aleppines still believed that the disease was carried into the city by foreigners, and was not affecting them. One common argument was that there were no signs of the plague among the Jews, who were considered to be more susceptible to it. But by mid-June there were already families who lost a few of their members to the plague. The

⁶⁶ Mariti reported that in most cities in Syria the plague was killed by intense heat, whereas in Aleppo a harsh winter would bring it to an end. See vol.1, pp. 294-295; Dawes explained that the hot weather "generally puts a stop to the progress of the distemper." This was the reason for the belief that the plague had disappeared by early May 1760. Dawes to Lyttleton, *Ibid.*

⁶⁷ Russell, *Plague*, pp. 16-18; announcing that the plague has arrived in the city had serious consequences, as reflected by the above-mentioned story about the merchant who tried to obtain a health certificate. See p. 12, n. 46.

⁶⁸ Dawes to Lyttleton, *Ibid.*

pestilence was making its way among the Christian and Jewish neighborhoods, which resulted in news of the epidemic spreading throughout the city. Many Christians and Jews were well-known and well-informed merchants. Toward the end of the month, the plague was already “dispersed in several of the more central streets; inasmuch, that there was hardly one district in which I did not know of persons lying infected.”⁶⁹ Consequently, the British finally sequestered themselves in their residences on the 29th of June. Barring a few Christians, who joined their European counterparts in hiding, locals continued even then with their ordinary business. Dawes, who went out of confinement for the funeral of the Dutch consul in July, when the plague was at its height, was surrounded by masses, who accompanied him from the consul’s house to the cemetery, many of whom were already infected with the disease.⁷⁰ People also continued visiting places, such as the *ḥamām*, where the risk of contamination was relatively high.⁷¹

During the summer of 1760, terrible scenes were viewed all over Syria. Walking in the streets of a city, one would feel the “tears and lamentations of those who were interring in heaps the unhappy victims of the malady; the fear of another earthquake; the still greater terror of bearing in one's bosom the destructive germ which had expanded with so much fury in the rest of the city; and the cries of despair which were succeeded by the silence of the dead.”⁷² The plague was a horrid experience for the denizens of Damascus and other cities, where thousands lost their lives. In Cyprus the situation was no better. Aleppo suffered a relatively low death toll, culminating at no more than 700.⁷³ But the plague abating in the fall of 1760, returned to rage in Damascus and Aleppo in the spring of the next year, and

⁶⁹ Russell, *Plague*, pp. 19-21.

⁷⁰ Dawes to Lyttleton, *Ibid.*

⁷¹ Russell, *Plague*, p. 24.

⁷² Mariti, vol. 1, p. 284.

⁷³ For Cyprus see Mariti, pp. 278-283 and Dawes to Lyttleton, *Ibid.*, who also commented on the other cities, including Damascus and Aleppo. For Aleppo see also Russell, *Plague*, p. 24.

lasted with little interruption till the end of 1762. This time the plague claimed many more lives, and "the city began to assume a desert dismal appearance; the publick khanes were little frequented by the Turkish merchants, and totally abandoned by the Christians. The streets and bazaars were thin of people, the greater part of the shops... were seldom open." The anguish of the city was reflected in the intermittent announcements of the names of the dead from the city's minarets and the stillness of the night, sometimes "interrupted by the shrill conclamations uttered by the women, at the instant a person of the family expires."⁷⁴ In Aleppo, where Patrick Russell conducted a survey of those dying of the plague, the numbers reached several hundred victims a week in the summers. Ghastly scenes of people laying in agony in the streets were witnessed everywhere. The plague was so severe that even the grave-diggers and washers of the dead, who seemed to be resistant to the epidemic for a long time, started to die. In addition, there were reported cases of the disease among those who confined themselves to their homes.⁷⁵

As if the devastation and havoc wreaked by the plague was not enough, Damascus and Aleppo were soon to face another affliction. The winter of 1763-1764 saw very little rainfall. It was followed by an extremely hot summer, which subsequently resulted in a drought, lasting till March 1765. The harvests of 1765 were therefore very poor, and the cost of basic staples soared. The price of wheat and barley more than quadrupled in less than a year. Rates dropped only in the year after, but even then remained relatively high. The period of famine was accompanied by fires that broke out throughout the summer of 1765, and the drying up of rivers and water reservoirs. In the ensuing days, millers used bulls to ground wheat, as no water was available. Much of the commerce in both cities came to a halt. Dawes commented that "the bad effects of [the famine] will, I fear, long be felt, as a great part of the poor natives were by its long continuance drained

⁷⁴ Russell, *Plague*, pp. 34-35.

⁷⁵ *Ibid.*, pp. 25-68.

to their past asper.” By the end of 1766, he was still receiving many petitions for charity.⁷⁶

The chain of catastrophes, which took place in Syria in the decade from 1756 to 1766, left many of the survivors in utter destitution. The prices of food were still excessively high in 1773.⁷⁷ If one could somehow persevere through the first famine, an earthquake, and was not carried off by the plague, a second prolonged famine was for many the last straw. In a notebook where distributed charity money was recorded, one finds a list of those receiving aid from the British in Aleppo, arranged by date and sum given. Each entry also provides basic information about the recipient, such as gender and religion. Thus one finds a steep rise in the number of charity beneficiaries from 1765 to 1768. It decreased only in 1769. But the amounts the British were able to raise for charity remained relatively the same, which was reflected in each person receiving less than half of the amount offered in 1765. It seems that the deplorable reality drove many to turn to foreign aid. Accordingly, one finds in the list of recipients Greeks, Armenians, Maronites, Syrians, Jews, women, whole families, pilgrims to Jerusalem, sick individuals, those imprisoned for not paying the *kharrāj* tax, and French residents of the city. Money was also “distributed at the gates” once in a month or two, supposedly to poor people who gathered there. Comparing the sums allocated for this ‘general’ type of charity to that given to individuals, one can assume that the British reached between 30 and 40 people using this method.⁷⁸

Muslims were noticeably absent from the British alms-list. This leads one to wonder whether only foreigners, Christians, and Jews developed awareness and response to calamities. At first, looking through the eyes of visitors, Muslims or the Ottoman authorities seemed rather callous toward

⁷⁶ Dawes to Lyttleton, September 30th, 1766, BL, Stowe MS 754, vol. 3, fol. 193-194. An account of the famine is also given in al-Dimashqī, p. 86.

⁷⁷ Al-Dimashqī, p. 110.

⁷⁸ “Disposals of charity money, 1765”, NA, SP 100/74/4.

natural disasters. Action was limited to resorting to God for help. For instance, in 1734 Christians and Muslims were visiting a tomb of a local saint outside the gates of Damascus, which allegedly had the power to cure diseases.⁷⁹ In May 1762, while the plague was rampaging through Aleppo, the *qāḍī* ordered that every mosque in the city recite a verse from the Qur'ān, which was believed to impede the spread of the pestilence. It was to be recited before each of the daily calls for prayer.⁸⁰ But more practical steps against the plague were also taken. They included city-cleaners mounted on asses, who collected rubbish from the streets and designated refuse dumps.⁸¹ In addition, in the plague season of 1760-1762 some local Muslims and Christians went into confinement, practiced until then exclusively by Europeans. Furthermore, the authorities made sure bodies of victims were quickly buried, to prevent the unpleasant spectacle of bodies piling up in the streets. Likewise, in the summer of 1762, the *qāḍī* of Aleppo issued an order capping the number of men and mourning women allowed in each funeral procession. These were new measures previously unheard of.⁸² And Aleppo was not the only place governors and *qāḍīs* were taking new initiatives that for foreigners and locals seemed innovative. In Acre, the governor bid to put in confinement those arriving from plague-stricken areas. He himself "checked the progress of the plague, by giving the inhabitants the means of withdrawing from its ravages... the Europeans became their model, and the governor... shut himself up."⁸³ The same picture emerges from local or Ottoman sources. Most striking is perhaps the quick re-building of buildings and houses that collapsed in the earthquakes of 1759. As early as the first months of 1760, re-construction began in the city of Damascus, and in 1761,

⁷⁹ Thompson, vol. 1, pp. 145-146.

⁸⁰ Russell, *Plague*, p. 49.

⁸¹ This service already existed in 1755. François de Tott, *Memoirs of Baron de Tott*, (London: G. G. J. and J. Robinson, 1785), vol. 2, part 4, p. 122.

⁸² Russell, *Plague*, pp. 34-35, 49.

⁸³ Mariti, vol. 1, pp. 287-288.

the destroyed sections of the Umayyad Mosque were rebuilt.⁸⁴ The speed with which reconstruction began in Damascus is quite remarkable in light of the many lives the plague was claiming in the city every day. An unusually extensive report found in the Ottoman Archives, documenting the damage in the city and the necessary repairs was drawn astoundingly quickly, its first parts dated 20 Jumādā al-Ūlā, 1173 (January 9th, 1760).⁸⁵ Comparing this record to other Ottoman documents that relate to earlier natural disasters, and analyzing it with evidence found in the writings of visitors, one may infer that the series of calamities that commenced in 1756 ignited a piecemeal change in the way the inhabitants of Ottoman cities responded to natural disasters. But to fully argue so requires further study.

If one accepts that at least some change, diminutive and local as it might have been, was initiated by the series of calamities described here, one also has to wonder what brought about a disaster of such magnitude. It could no doubt be ascribed to some degree to chance – the coincidental occurrence of one calamity after another. Yet one could also cautiously come up with two probable explanations for the chain of catastrophes, a short- or long-term one. One possibility is that the famine of 1756-57, followed by a feverish epidemic and a severe earthquake, left many without food and shelter long enough to acutely weaken their immune systems. This in turn facilitated the infection of people, whose emaciated bodies could not cope with the disease. Combined with events that involved mass participation, like celebrations for the birth of a son to the Sultan,⁸⁶ one can understand the extent of the plague and its persistence for almost three years. The other, long-term explanation is applied from the theory of William Jordan. In his book *The Great Famine*, Jordan argued that a possible explication for the

⁸⁴ Al-Dimashqī, pp. 80-82.

⁸⁵ BOA, MAD, 3160, first 20 images.

⁸⁶ Russell, *Plague*, pp. 29 (for 1761, when the Turkish *bayram* and Easter fell on the same week, at a time when the plague was making its way into the city), 43 (for the week-long festivities for the birth of the son of the Sultan).

severity of the Black Death in the mid-fourteenth century was that the Great Famine of 1315-1322 prevented proper growth and development of children at the critical stage, where full recovery is never possible. So the children of the 1320's were the adults of the Black Death period.⁸⁷ Respectively, one would look for past episodes, which could have left a trace on the generation that suffered the plague of 1760-62 as adults. From 1741 to 1744, Syria experienced famine. In its first year, the famine was so dire that even the most basic staples were extremely hard to get. In Damascus, rumors were spread that the famine was only the first part of a series of disasters, and that a major earthquake was to come next.⁸⁸ The rumors eventually turned out to be partly true: the famine preceded another calamity, but it was the plague rather than an earthquake. From 1742 to 1744, it ravaged Aleppo and other cities and villages in Syria. It was accompanied by other epidemics, such as smallpox, which claimed many lives as well.⁸⁹ Thus it is possible that those who were growing up in the early 1740's and survived the famine and the plague were more susceptible to it in the early 1760's. The same can be assumed for the plague, which persisted in Syria and Palestine between 1785 and 1787 and resulted in a higher mortality rate than that of 1760-62.⁹⁰ This theory, as plausible as it seems, still lacks substantial evidence, which further research would possibly reveal. It nevertheless adduces the relevance of the writings of visitors to the study of the social consequences of natural disasters.

The works of foreigners enable one to better sense people's experience on the streets of an earthquake-, famine- or plague-stricken city. They cannot substitute other important sources, such as Ottoman documents or chronicles written by locals, as they lack a certain internal perspective. Yet, as the last

⁸⁷ William Chester Jordan, *The Great Famine: Northern Europe in the Early Fourteenth Century*, (Princeton, NJ: Princeton University Press, 1996), pp. 184-187

⁸⁸ Al-Budayrī, pp. 4-5, 12-15 for the first year; 25, 35 for subsequent years.

⁸⁹ Russell, *Aleppo*, vol. 2, pp. 340-348 for the plague; 315-321 for other diseases.

⁹⁰ Panzac, pp. 33, 360.

type of sources is sparse on details, the history of natural disasters in the Ottoman Empire cannot be written without employing travelogues and consular reports. These can also contribute to one's knowledge on the long-term social and economic consequences of natural disasters – a topic not directly addressed here. Michael Dols showed that the Black Death in the fourteenth century brought about a continuous rise in the prices of grain and other commodities, due to the increased cost of labor. This continued for several years after the epidemic subsided.⁹¹ In Europe, the plague prompted changes in the ways charity was allocated; hospitals were run; and commercial connections maintained.⁹² And the great fire of London in 1666 introduced a requirement to obtain a certificate to build a house; new construction materials; and more careful urban planning.⁹³ In the Ottoman Empire, major natural disasters are not known to have launched such far-reaching changes. Yet, studying the works of visitors in Ottoman Syria, one gets the impression that from the second half of the eighteenth century the authorities and inhabitants of major cities refused to remain indifferent to calamities. Whether this behavior indicated a lifelong social process should be the scope of another study.

⁹¹ Michael Dols, *The Black Death in the Middle East*, (Princeton, NJ: Princeton University Press, 1977), pp. 259-263.

⁹² Brian Pullan, *Rich and Poor in Renaissance Venice: The Social Institutions of a Catholic State, to 1620*, (Cambridge: Harvard University Press, 1971), pp. 33-83; Sandra Cavallo, *Charity and Power in Early Modern Italy: Benefactors and Their Motives in Turin, 1541-1789*, (Cambridge: Cambridge University Press, 1995), pp. 46-50.

⁹³ Stephen Porter, *The Great Fire of London*, (Gloucestershire, UK: Sutton Publishing, 2001), pp. 74-119.