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THE OTTOMANS DURING THE GLOBAL CRISES OF CHOLERA AND PLAGUE: THE VIEW FROM IRAQ AND THE GULF

Abstract

The cholera and plague pandemics of the 19th and early 20th centuries shaped Ottoman state-building and expansionist efforts in Iraq and the Gulf in significant ways. For Ottoman officials, these pandemics brought attention to the possible role of Qajar and British subjects in spreading cholera and plague, as well as the relationship between Iraq's ecology and recurring outbreaks. These developments paved the way for the expansion of Ottoman health institutions, such as quarantines, and the emergence of new conceptions of public health in the region. Specifically, quarantines proved instrumental not only to the delineation of the Ottoman–Qajar border, but also to defining an emerging Ottoman role in shaping Gulf affairs. Moreover, the Ottomans' use of quarantines and simultaneous efforts to develop sanitary policies informed by local ecological realities signal a localized and ad hoc approach to disease prevention that has been overlooked. Ultimately, this study demonstrates that environmental factors operating on global and regional scales were just as important as geopolitical factors in shaping Ottoman rule in Iraq and the Gulf during the late Ottoman period.

Keywords: cholera; Gulf; Iraq; Ottoman Empire; plague; quarantine

The Gulf and the extensive frontier region that lay between the Ottoman Empire and the successive Persian states that neighbored it were sites of immense human mobility and ecological diversity. These vast terrains were not only a crossroads of lucrative trade routes that attracted merchants from all over the world;¹ they were also important transit points for Muslim pilgrimage caravans headed to the Hijaz and the Shi'i shrine cities of Najaf and Karbala.² Geographically, the region is home to the Euphrates and Tigris rivers, their tributaries, and the marshes into which they flow, as the twin rivers join to form the Shatt al-'Arab, which discharges into the Gulf.³ At various points in time, the movement of so many people, as well as their goods, ideas, and beliefs, carried the potential to create geopolitical complications for the Ottoman Empire and other states vying for influence in the region, especially when competing economic interests and rival claims to spiritual legitimacy came into play.⁴ Moreover, the region's unique ecological challenges often threatened to unravel the stability of Ottoman rule, especially during times of scarcity and state–tribal conflicts featuring ill-conceived tactics of hydraulic warfare.⁵

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The combination of these factors also played a role in making the region particularly susceptible to epidemics, whether these were caused by geographically specific reasons or the regular movement of goods and people across vast distances. And by the 19th century, when the consequences of such epidemics were exacerbated both by the increased speed of human mobility and the region's fragile hydraulic infrastructure, this reality incentivized the Ottoman state's increased intervention in the matter of disease prevention, often building on previous efforts and shaping Ottoman rule and understandings of sanitation in the Iraqi provinces and surrounding Gulf region in significant and previously unexplored ways.

Typically, the Ottoman Empire's efforts to assert itself along its landed frontier shared with the Qajar state and the Gulf are framed in terms of a series of geopolitical struggles that emerged over the course of the 19th and early 20th centuries. There is, of course, good reason for this. The delineation of the Ottoman–Qajar frontier into a fixed boundary, for instance, began, in part, as a British- and Russian-backed effort in the 1840s to prevent further Ottoman–Qajar territorial disputes that proved harmful to British and Russian interests.⁶ Moreover, by the 1860s, after centuries without any meaningful political involvement in the Gulf, the Ottomans began to increase their naval presence in the region, launching a campaign in 1871 to occupy portions of Eastern Arabia in an effort to undermine British influence and unlock the region's agricultural potential for imperial revenue raising.⁷ Additionally, during the opening decade of 20th century, the Ottomans were unable to resist the urge to occupy portions of northwestern Iran by appealing to the Kurdish inhabitants' Sunni identity and reviving claims that the region was actually Ottoman territory.⁸ And yet, though these developments were undeniably important and offer examples of the Ottoman Empire's willingness to experiment with new forms of empire building along its peripheries,⁹ they are only part of an intricate story involving Ottoman state-building and expansionist efforts in the Iraqi provinces and the Gulf during the late Ottoman period.

Equally important for understanding this process is the broader epidemiological context in which it unfolded—a context embodied by the cholera and plague pandemics of the 19th and early 20th centuries and one whose implications for the study of late Ottoman history have only been thoroughly examined in other regions of the Ottoman Empire,¹⁰ a few noteworthy exceptions notwithstanding.¹¹ As this article demonstrates, the severity of these pandemics—a severity brought about, in large part, by a combination of ecological challenges and technological advances that greatly increased the speed of human mobility—made Ottoman disease-prevention efforts an integral component of Ottoman state-building and expansionist efforts in Iraq and the Gulf during the 19th and early 20th centuries. At various points during this period, the suspicion that pilgrims, merchants, and other passers-by from Qajar Iran and British India were the unwitting importers of cholera and plague into the Ottoman Empire not only informed Ottoman efforts to control the movement of people through the use of quarantines; it also led the Ottoman state to coordinate its efforts to direct international politics in the matter of disease prevention. Significantly, these very developments also gave rise to concerted Ottoman efforts to understand the relationship between ecology and epidemic diseases in the Iraqi provinces in geographically specific ways, especially in the face of repeated outbreaks of cholera and, at times, malaria—a development that might be better understood as the Ottoman state's attempt to make the region and its susceptibility to epidemics

“legible,” to borrow James C. Scott’s influential term.¹² Although the Ottomans may not have always succeeded in their attempts to control the movement of people, convince European powers of the efficacy of their sanitary policies, or conquer the microbes responsible for the several epidemics that occurred in the empire’s Iraqi provinces, “unfulfilled goals and unfinished plans,” as Mostafa Minawi reminds us in a different though applicable context, can be just as revealing as a focus on “final outcomes.”¹³ By turning our attention to Ottoman disease-prevention efforts in the Iraqi provinces and the Gulf, we are able not only to move beyond a framework that privileges geopolitical motives for explaining Ottoman state building and expansion in the empire’s eastern and southernmost peripheries, but also to appreciate just how important these regions themselves were to the development of Ottoman conceptions of public health during the late Ottoman period.

THE ORIGINS OF A CRISIS: CHOLERA AND THE PERSISTENCE OF PLAGUE

Epidemics, whether of plague or otherwise, were recurring features of life in the Ottoman Empire even before the 19th century.¹⁴ The eastern frontier regions of the empire were not immune to this reality. Following the Ottoman conquest of Baghdad and Basra during the 16th century, for example, a new channel for plague to flow between the Eastern Mediterranean and the Gulf was opened, a development that appears to have contributed to plague outbreaks in Basra and Baghdad, respectively, as early as 1578 and 1596.¹⁵ Visitations of plague were frequent enough that, in his history of Baghdad, the Mosuli chronicler Yasin al-‘Umari (1774–1820) recorded no less than three major outbreaks in the city during the period of Ottoman rule before the 19th century.¹⁶ Moreover, in addition to plague, malarial fevers associated with severe flooding, especially near Basra, were regularly reported by Europeans who traveled through Iraq before the 19th century,¹⁷ adding yet another layer of complexity to the region’s disease profile.

The arrival of cholera to the Gulf further complicated this picture. Originating in India in 1817, the first cholera pandemic, which lasted until 1824, manifested itself in various parts of the world due to the spread of European colonial and military power and the frequency and increased speed of human mobility in the early 19th century.¹⁸ By 1821, these factors helped bring cholera to the Gulf, where East India Company officials watched in horror as the disease ravaged places such as Bahrain, Qeshm near the Strait of Hormuz, and Bushire.¹⁹ By the time cholera reached Basra later that year, its appearance caused such alarm that several locals reportedly fled to the surrounding desert regions.²⁰ Flight, of course, was not an uncommon response for Ottoman subjects in such situations.²¹ After all, the disease’s effects during this outbreak were devastating: without specifically mentioning cholera by name, for example, the chronicler ‘Uthman al-Basri noted that, in the summer of 1821, the people of Basra were severely afflicted by “a great epidemic and general misfortunate” (*min waba’ ‘azīm wa-balā’ ‘amīm*) that caused an estimated 10,000 deaths in Basra and its surroundings.²² For his part, the chronicler Resul Kerkuklü Efendi (d. 1826) estimated the death toll at Basra to have been upwards of 15,000,²³ describing cholera as being not only of Indian origin, but also “a strange, severe disease—its like unseen and its name unheard of” (*misli nadide ve ismi naşanide bir maraz-ı şedid-i acib ve azar-ı canfıgar-ı garib*).²⁴ Even the Scottish traveler James Fraser (1783–1856), who witnessed the cholera outbreak at Basra, would

go on to claim that local Ottoman authorities “all fled without taking any precaution for preserving the internal peace of the city, or making a single attempt to check the progress of the distemper, still less to administer assistance or comfort to those afflicted by it.”²⁵

The severity of cholera and a general unfamiliarity with its method of transmission at this time may have given observers such as Fraser the mistaken impression that Ottoman authorities were not responding to the crisis in Basra. However, given what we know about not only the lengths to which the Ottoman state went to adopt regulations in response to epidemic diseases such as plague, but also the formation of an Ottoman system of health administration as early as the mid-16th century,²⁶ it is highly unlikely that Ottoman authorities would have avoided intervening in such a crisis. Moreover, as previous studies have shown, during the early 19th century, disease prevention at the provincial level was typically the responsibility of Ottoman governors.²⁷ In that regard, a letter to British Indian officials from the Ottoman governor of Baghdad, Davud Paşa, under whose authority Basra remained, appears to demonstrate Davud’s desire to intervene in the cholera crisis at Basra, despite not knowing the best course of action.²⁸ Specifically, Davud explained that, because “the Almighty preserver of Mankind has entrusted to [him] the care and protection of his creatures,” he had become “anxious” over the people of Basra, many of whom perished on account of the “Cholera Morbus now prevailing throughout Hindoostan” following its appearance in the Gulf and Basra. In his letter, Davud would go on to request medical assistance from British Indian officials, for he had become aware that “English Physicians had discovered a remedy for this complaint,” which, as he had come to learn, “was conjectured” to have been “produced by the corruption of the air and water and intensity of heat.”²⁹ Davud’s letter displays a willingness to intervene in the cholera crisis; but it also hints at uncertainty over how to address the problem of cholera—an uncertainty not altogether surprising when one considers that, up to this point, cholera had been a completely unfamiliar disease in Ottoman territory. Thus, though cholera eventually did reach Baghdad in 1821,³⁰ it is unlikely that it did so due to a lack of initiative on Davud’s part. On the contrary, just as Davud’s appeal for British medical assistance might reasonably be attributed to the “British prestige” that Stephen H. Longrigg claimed was “very marked” among Davud and his predecessors during the era of Georgian mamluk rule in Baghdad,³¹ it is just as reasonable to assume that Davud simply felt more comfortable appealing to authorities in closer proximity to the center of crisis, rather than Ottoman authorities in the imperial capital of Istanbul,³² a city that would not experience its first cholera outbreak until 1831, amid the second cholera pandemic (1829–51).³³

Meanwhile, the much more familiar sanitary threat of plague would continue to ravage parts of Iraq, a development likely associated with the final stages of the Second Plague Pandemic, which appears to have continued into the 19th century.³⁴ In 1828, for instance, reports that plague had appeared in the town of Baghdad and its surroundings led the East India Company’s political agent at Basra to “suggest the propriety of subjecting the native shipping to quarantine of greater or less duration, there being unquestionably a more dangerous and less controulable [*sic*] source of contagion than ships under British Pass and Colour.”³⁵ Three years later, in 1831, during an Ottoman expedition to replace Davud Paşa as governor of Baghdad, plague appeared once again, causing the deaths of several of Davud’s soldiers and supporters and scaring people from surrounding towns into fleeing in such numbers that the year’s harvest went to waste.³⁶ The situation had scarcely

improved by 1832, when famine, caused by a recent locust attack and peasant flight from the spread of plague, appeared in Baghdad and its surroundings.³⁷ In fact, the effects of plague were so devastating that the French consul at Baghdad reported that the daily death toll was upwards of two hundred people, shops were left deserted, and commerce was at a complete standstill.³⁸

In sum, although the Ottoman Empire's Iraqi provinces had a long and complicated history of dealing with epidemics, their disease profile was significantly altered with the appearance of cholera in the 1820s. Moreover, the persistence of plague in the region was a harsh reminder of the disease's disruptive potential. In view of this potential, British officials were ready to subject Ottoman subjects to quarantines, as evidenced by the example of plague's appearance in Baghdad in 1828. The Ottomans, as it turned out, were prepared to use quarantines in much the same way, though by the time they decided to do so, Britain—the European state with the most immediate interests in Iraq and the Gulf—was not so willing to support this move.

LEVELING BLAME: DEBATING QUARANTINE ON A GLOBAL STAGE

The Ottoman Empire's adoption of quarantines in 1838 came at a critical juncture for the empire: it was facing not only sanitary threats such as cholera and plague,³⁹ but also an economic threat in the form of the influx of cheap European textiles following the abolition of state monopolies and introduction of low tariffs as a result of the Anglo-Turkish Convention (1838).⁴⁰ For Ottoman reformers, quarantines, which could be used both to keep diseases at bay and to circumvent existing free trade agreements, seemed to offer a potential solution to this two-pronged threat.⁴¹ However, recognizing the harm that Ottoman quarantines could pose to European commercial interests, European states (and Britain in particular) quickly moved to internationalize the Ottoman Empire's quarantine operations in what became known as the Constantinople Superior Health Council.⁴² For the remainder of the 19th century, European states would use their influence over this international oversight body to question the efficacy of Ottoman quarantines and urge the Ottomans to devote their efforts to improving the quality of health within the empire through a series of sanitary reforms.⁴³ Nevertheless, starting in the 1830s the Ottoman Empire expanded its quarantine operations empire-wide.⁴⁴ By the time these developments began shaping Ottoman quarantine operations in Basra in 1849, the British consul at Baghdad wrote a panicked critique to the British ambassador in Istanbul, arguing that existing Ottoman quarantine regulations were "singularly ill adapted to the Indian seas," could not be effectively enforced at many Gulf ports, "would most seriously impede commerce," and appeared unnecessary because "plague is unknown in the India Seas, except when it may happen to be brought down from the Persian Gulf or the Red Sea."⁴⁵ The Ottomans, as we shall now see, viewed things very differently.

More than anything else, it was repeated outbreaks of cholera, rather than plague, in the empire's Iraqi provinces that accounted for the Ottoman Empire's initial use of quarantines along its landed frontier shared with the Qajar state and, later, in the Gulf. Informing this decision was the Ottoman state's perception that Qajar and British subjects were responsible for importing cholera into the empire's Iraqi provinces. For example, during the second cholera pandemic (1829–51) alone, the Iraqi provinces experienced

cholera outbreaks in 1846,⁴⁶ 1847,⁴⁷ and 1851,⁴⁸ making the task of identifying cholera's source of origin and method of transmission of critical importance. In that regard, the Ottomans appear to have placed their initial suspicions on Qajar subjects, enforcing quarantine regulations in the Qajar town of Kermanshah in 1846 after the appearance of cholera in Iran.⁴⁹ By 1848, when cholera reappeared in Iran, the Ottoman government took steps to establish a vast network of quarantine stations along the Ottoman–Qajar border.⁵⁰ That year, the Ottoman sultan even issued a decree announcing the establishment of this network on account of there being “presently no quarantine in the environs of Iraq, despite its numerous benefits being well-known and great attention and care having been taken toward implementing sanitary measures in accordance to established ordinances in every region of my well-protected domains” (*menafi-i adidesi meshud ve misbet olan tahaffuz usulunun memalik-i mahrusamin her tarafında nizamat-ı mukarreresi üzere icrasına dikkat ve itina olunmakta ise de havali-i Irakiye’de eylevm karantina olmadığından*).⁵¹ By 1851, when delegates from several European states and the Ottoman Empire convened in Paris for the inaugural international sanitary conference, which was focused on the standardization of quarantine measures in Europe and the Ottoman Empire,⁵² the Ottomans took the opportunity to make the case for establishing a network of quarantines that would extend from the shores of the Black Sea all the way down to Basra at the head of the Gulf.⁵³ A certain Dr. Bartoletti, who was a member of the Ottoman delegation, argued that this network of quarantines could be used to inspect the large Shi’i pilgrimage caravans that entered Ottoman territory through the emerging Ottoman–Qajar land border. He would go on to argue that the Ottomans could expand their quarantine operations into the Red Sea for the purposes of inspecting individuals arriving from British India, which he labeled as “the principal home and undeniable source of the scourge,” based on his suspicion that it was British Indian Muslims who were importing cholera into Ottoman territory through the Red Sea.⁵⁴

Armed with such suspicions against Qajar and British Indian subjects, the Ottoman Empire began expanding its quarantine operations along the Ottoman–Qajar land border and into the Gulf. After all, given that the Iraqi provinces would continue to be ravaged by cholera outbreaks during the remainder of the 1850s, the global crisis of cholera had come too close to home for the Ottomans’ own comfort.⁵⁵ By 1860, in light of repeated outbreaks in the Iraqi provinces that were suspected to have been of Qajar or Indian origins, the Ottoman Empire pushed for stricter enforcement of quarantine measures along the Ottoman–Qajar border and in the Gulf.⁵⁶ Moreover, as fears that cholera would reach Europe increased after a particularly violent outbreak in the Hijaz in 1865, identifying the exact origins of cholera became a matter of great importance to European states, the Ottoman Empire, and the Qajar state alike, leading to the international sanitary conference of 1866, which conclusively identified British India as the chief exporter of cholera.⁵⁷

Although the role of the 1866 conference in reforming the Ottomans’ quarantine operations in the Red Sea region has correctly been noted,⁵⁸ it should also be recognized for having brought attention to the necessity of standardizing quarantine measures along the Ottoman–Qajar border and in the Gulf region. At the conference, the Ottoman delegation claimed that Shi’i pilgrims traveling from Qajar territory to the Shi’i shrine cities in Iraq were importing cholera into the Ottoman Empire—a claim that the Qajar delegation rejected by arguing that Indian pilgrims entering Ottoman territory through the Gulf

were importing the disease.⁵⁹ The Qajar delegation also rejected a proposal that called on the Qajar government and the Imam of Muscat to cooperate in preventing cholera from entering the Gulf, arguing that the Qajar state could act on its own.⁶⁰ Moreover, when the Qajar delegation proposed the establishment of an international commission to oversee Ottoman quarantine operations along the emerging Ottoman–Qajar border, the Ottoman delegation rejected the proposal, pointing out that it possessed the necessary means to oversee its own quarantine operations in the region.⁶¹ Significantly, the Ottoman delegation even proposed extending its quarantine operations further into the Gulf by inspecting vessels at Faw at the head of the Gulf.⁶² For the Ottoman Empire, then, cholera's repeated appearance in the Iraqi provinces and the question of the efficacy of quarantines in general provided an opportunity for it not only to reaffirm sovereignty over emerging state borders but also to carve out a position for itself to achieve greater influence in Gulf affairs.

As the Ottoman Empire positioned itself to play a greater role in defining the emerging quarantine regime in the Gulf, it began targeting British Indian vessels much more aggressively. This was particularly the case during the fifth cholera pandemic (1881–95). In 1881, for example, when reports of a cholera outbreak in Bombay and Surat reached the Ottoman Empire, the Ottomans imposed a quarantine of ten days at Basra for all arrivals from India, despite British protests that the low number of cholera-related deaths did not justify the imposition of such strict quarantine measures.⁶³ By the start of the following year, British officials began strategizing how best to challenge Ottoman quarantine regulations, arguing that the Ottoman government's designation of Bombay as a "contaminated place" was unjustified under existing international sanitary agreements. That British merchants often viewed Ottoman quarantine fees as arbitrary and excessive only strengthened British efforts to challenge such quarantine measures in the Gulf.⁶⁴ These challenges proved to be in vain, however, when in 1883 the Ottoman government imposed a quarantine of twenty days at Basra after reports of a cholera outbreak in Bombay began circulating.⁶⁵ The Ottomans also enforced these strict quarantine measures despite the fact that individuals often arrived at Basra with clean bills of health as the threat of cholera in Bombay began to subside.⁶⁶ The Ottomans continued to target British Indian vessels repeatedly in 1884,⁶⁷ 1887,⁶⁸ and 1888.⁶⁹

For Britain, whose interests in the Gulf had largely been focused on protecting British shipping from piracy and incorporating semiautonomous Arab leaders into its India-based empire,⁷⁰ Ottoman quarantines naturally appeared, at best, as an unexpected challenge to British influence and, at worst, as nothing more than thinly veiled attempts to increase Ottoman influence in the Gulf. Although this may have been the overall *effect* of the Ottomans' use of quarantines in the Gulf, political motivations in themselves do not explain the Ottomans' persistent quarantine policy during the 19th century. The broader epidemiological context in which these quarantine regulations emerged, both along the Ottoman–Qajar land border and in the Gulf, was equally important, as demonstrated by the Ottoman state's responses to specific sanitary threats that it perceived to be coming from abroad during the many cholera pandemics of the 19th century. As we shall soon see, however, quarantines were just one tool in the Ottoman state's arsenal against epidemic diseases in the empire's Iraqi provinces. Just as important would be emerging knowledge about the role of these provinces' ecology in the spread of epidemic diseases.

BEYOND QUARANTINES: ECOLOGY AND SANITARY REFORM IN THE IRAQI PROVINCES

The Ottoman Empire's shift away from a strategy of disease prevention focused on containing the movement of people through quarantines and toward an "infectionist" or "anticontagionist" view that identified local and environmental conditions as the cause of plague and other epidemic diseases has been attributed to Ottoman health officials' exposure to European medical advances of the 1890s.⁷¹ Although the Ottomans' exposure to such medical advances is undeniable, evidence from the empire's Iraqi provinces and elsewhere complicates this narrative and points to the importance of a "localized set of axes" on which Ottoman disease prevention efforts during the late 19th century actually unfolded.⁷² Significantly, the Ottomans continued using quarantines while simultaneously adopting health measures informed by local ecological realities in the Iraqi provinces. The argument that the Ottoman Empire used quarantines for political reasons, such as undermining European commercial interests and controlling the movement of people, is an important one that rightly deters us from the rather simplistic conclusion that quarantines were not, in the final analysis, coercive tools emblematic of the emergence of the modern state.⁷³ However, just as European states viewed quarantines as a "wise precaution" during their earliest efforts to combat cholera and yellow fever at time when there was an absence of medical consensus,⁷⁴ it might also be helpful to conceptualize the Ottomans' use of quarantines in much the same way: retaining them, while gradually phasing in new approaches based on their own observations and conclusions about Iraq's ecology and susceptibility to epidemic diseases.

The possible connection between ecology and epidemic diseases was one with which Ottoman officials were well aware.⁷⁵ In the empire's Iraqi provinces, even as early as the 1840s and 1850s, when the Ottomans began carrying out geographical surveys of its landed frontier shared with the Qajar state, Ottoman officials such as Mehmed Hurşid became aware of the possible connection between malarial fevers around Basra and the flooding of the lower Euphrates, a situation made worse by the river's faulty hydraulic infrastructure.⁷⁶ For his part, Midhat Paşa, the well-known governor of Baghdad, was also aware of the lower Euphrates' susceptibility to malarial fevers.⁷⁷ Moreover, in 1889, during a particularly violent cholera outbreak in the lower Euphrates region, Ottoman health authorities noted that this latest outbreak of "Indian cholera" (*Hindi kolera*) was concentrated primarily in the marshes between the lower Euphrates and Tigris rivers,⁷⁸ thus incentivizing the Ottoman government to allocate state resources for the drainage of marshes (*bataklık*) in the lower Euphrates region as a preventative measure against future outbreaks of cholera and "other diseases" (*ilal ve emraz-ı saire*).⁷⁹ In fact, the possibility that local environmental factors could be at fault during the 1889 outbreak was one that the Ottoman government took seriously: in the city of Baghdad itself, for example, the Ottoman government prohibited the killing of goats for meat and the drawing of water from the Tigris river to further check the spread of cholera, decisions that led the city's butchers and water carriers to go on strike.⁸⁰

The timing of these changing approaches to the problem of epidemic diseases in the empire's Iraqi provinces was also right. After all, regarding cholera, only six years prior, in 1883, the German bacteriologist Robert Koch had successfully confirmed the role of water in the disease's transmission.⁸¹ Moreover, the Ottoman state appears to

have been interested in gathering information about the relationship between ecology and disease in the Iraqi provinces. In 1883, for instance, a certain Dr. Şerifüddin bin Arif, who was a member of the Ottoman Medical Society (Cemiyet-i Tıbbiye-i Osmaniye), was appointed to the local health administration of Basra at the request of the Ottoman Ministries of Health and Interior.⁸² During his two-year stay in Basra,⁸³ Arif made certain observations about Basra's ecology and outbreaks of disease, including a number of skin, nervous system, stomach, and intestinal illnesses, while maintaining that cholera was a disease of Indian origins.⁸⁴ He would later compile these observations in his final report, *Basra Şehri Hakkında Topografya-ı Tibbi* (The Medical Topography of the City of Basra), published in 1891–92.⁸⁵ Similarly, among Ottoman *salnames* (almanacs) for the province of Basra, that from 1891–92 stands out for having an entire section on the topic of “Ekalim-i Harraya Hıfzısıhha” (Sanitation Pertaining to Hot Regions).⁸⁶ The section cites marshes and swamps as being “a cause of illness and detriment to health” (*muris-i maraz ve muzır ül-sıhhat*) in flood-prone regions along famous rivers such as the Nile, Ganges, Mississippi, Euphrates, and Tigris.⁸⁷ It also notes that “some doctors” (*hükemânın bazıları*) have argued that putrefactions caused by stagnant waters can give rise to diseases such as plague, cholera, and yellow fever.⁸⁸

For Ottoman authorities, the imperative to make the Iraqi provinces' disease profile more “legible” increased even more so during the 1890s as the threat of cholera continued. For example, in 1893, a particularly violent cholera epidemic occurred in the area between Basra and Baghdad.⁸⁹ By 1894, as the threat of cholera grew increasingly dire, the Ottoman government tasked Mehmed Şakir Bey, who was an Ottoman sanitary official at Haydarpaşa Hospital in Istanbul, to carry out a study on cholera and sanitary reform in the Iraqi provinces.⁹⁰ Given his role as the chief architect of many of the sanitary reforms introduced in the Hijaz during the 1890s, Mehmed Şakir was the ideal candidate for this job.⁹¹ His final report, *Hindistan Kolerası ve Irak'ın Islahat-ı Sıhhiyesi* (Indian Cholera and Sanitary Reform in Iraq), which was submitted in 1895, is notable for recommending several sanitary reforms in the Iraqi provinces, many of which called for improved water management. For the city of Basra proper, for example, Şakir noted how advances in the new field of bacteriology provided insights into the extent to which one of Basra's main supplies of drinking water, the 'Ashar River, was polluted by mud, vegetation, trash, and animal waste.⁹² Like Ottoman officials before him, Şakir also noted how severe flooding and the presence of large marshes around Basra and along the lower Euphrates region contributed to the spread of fevers.⁹³ The city of Baghdad had similar problems: not only were the polluted waters of the Tigris entering the canals and wells from which the city's inhabitants obtained water, a problem that Şakir regarded as being “of careful attention from the viewpoint of contemporary medicine” (*tababet-i hazıra muvacehesinde fevkalhad mu'tena addolunur*),⁹⁴ the lack of a proper sewage system also put the city at risk of waterborne diseases.⁹⁵ And with respect to quarantines, Şakir even noted some of the difficulties of enforcing quarantine procedures in a place like Faw, where individuals could easily evade Ottoman health authorities by going to the nearby Qajar port city of Muhammara, which Şakir accused of having lax quarantine procedures.⁹⁶

Equipped with such knowledge, the Ottoman government was in better position to respond to future cholera outbreaks in the Iraqi provinces. While quarantines remained the Ottoman government's principal recourse during such outbreaks, other measures

focused on disinfection and water management were also used. In 1899, for instance, the Ottoman government responded to an outbreak of cholera in Basra by prohibiting people from leaving the city, enforcing a quarantine period of ten days, burning contaminated materials, and carrying out disinfection procedures.⁹⁷ And in 1904, in response to the appearance of cholera in the vast area between the Iraqi provinces and Greater Syria, the Ottoman government tasked a certain Hamdi Aziz, who was affiliated with the Imperial College of Medicine, to head a special commission to investigate the problem of cholera in this region.⁹⁸ His final report, entitled *Suriye Kit'asıyla Zor Sancağı ve Hitta-ı İrakîye'de Kolera İstila'âtı, 1318 İla 1320* (The Ravages of Cholera in the Land of Syria, the Subprovince of Zor, and the Region of Iraq, 1318–1320), explained the most effective ways to implement quarantine procedures and establish sanitary cordons across large areas for the purposes of disinfection and made clear the Ottoman government's official position on the role of Qajar Iran and British India as exporters of cholera to Iraq during the 19th century.⁹⁹ At the same time, however, Aziz's report listed a number of recommendations for fighting cholera, some of which focused on water management, noting that all experts agreed that water was the principal means for the transmission of cholera microbes, making it that much more important to adopt measures that would ensure the availability of potable water.¹⁰⁰

In the end, the Ottomans used quarantines alongside emerging techniques for improving environmental management and local sanitary conditions. If the simultaneous use of these strategies appears contradictory today, it clearly did not to Ottoman health officials. Politics were surely at play in the Ottoman Empire's use of quarantines, as previous scholarship has demonstrated. However, also at play were legitimate sanitary threats, and at times, both considerations simultaneously informed the Ottoman Empire's use of quarantines. The Third Plague Pandemic, which was the last major global incident of plague, and the Ottoman response to it help demonstrate the extent to which this could be the case—a story to which we now turn.

PLAGUE AND THE OTTOMAN GULF

In 1897, at the height of what historians of medicine refer to as the Third Plague Pandemic, delegates from several European states, the United States, the Ottoman Empire, and the Qajar state in Iran convened in Venice for an international sanitary conference. Their goal was to develop sanitary measures that would halt the spread of plague, which, by 1894, had attained pandemic form once it reached Hong Kong from China's Yunnan Province, where signs of a new plague crisis first appeared in 1855.¹⁰¹ By 1896, the disease had arrived in Bombay, where mortality rates, as well as the unsettling social, political, and economic effects associated with plague's appearance, quickly focused international efforts on the development of quarantine regulations and prophylactic measures that would help bring an end to the pandemic.¹⁰² The fears informing such efforts were, of course, well-founded, given that recent technological advances in steamship and train travel greatly heightened the risk that pilgrims, merchants, and leisure travelers, among other passers-by, could spread diseases at tremendous speed.¹⁰³ For its part, the Ottoman Empire, which was tied to British India and the broader Indian Ocean world by extensive trade networks and pilgrimage routes, remained just as vulnerable to this latest sanitary threat as it had been to the many cholera pandemics that wreaked havoc

in Ottoman territory and other parts of the world just a few decades earlier. Certainly aware of this reality, Koçoni Efendi, an Ottoman sanitary official and member of the Ottoman delegation to the Venice conference, communicated the Ottoman government's official position on the pandemic to his fellow delegates. Not only did he endorse the developing consensus regarding the pandemic's Chinese origins; he also emphasized that "the virulent and contagious character of the scourge are undeniable," as evidenced by plague's effects in places such as Karachi and Gwadar now that it had arrived in British India. Koçoni Efendi also made clear that "the incessant commerce of our Persian Gulf ports with the contaminated countries exposes [the Ottoman Empire] to great and imminent dangers, and there is no doubt that the rigorous measures that will be taken by the Conference will have to protect Turkey [*sic*], as well as the neighboring countries [and] therefore Europe."¹⁰⁴ Clearly, then, the Ottoman Empire, given its close proximity to the center of crisis, fashioned itself as a bulwark against the spread of plague to other parts of the world.

To be sure, the Ottomans did not wait for the convening of the Venice conference to respond to the threat of plague, which had appeared in Bombay in September 1896. By October of that year, Ottoman authorities had already informed the British consul at Baghdad that all vessels arriving from Bombay were to perform quarantine at Basra for a period of twenty days.¹⁰⁵ By December, the Ottoman government also extended quarantine measures to the neighboring Qajar state: all ships arriving at Basra from Gulf ports controlled by the Qajar government were to perform quarantine at Basra for a period of ten days. Moreover, because of the proximity of the Qajar port city of Muhammara to Basra, all individuals arriving from Muhammara, regardless of whether they arrived by land or river, were to be denied entry into the Ottoman Empire altogether.¹⁰⁶ By the end of 1896, the Ottoman government had also extended a mandatory ten-day quarantine at Basra on all ships arriving from Karachi on the basis of reports that plague had reached that city.¹⁰⁷

These immediate and stringent measures, which matched the panic created by plague's appearance in Bombay, would eventually give way to a more measured and focused Ottoman vision of how to prevent the spread of plague, a vision that the Ottoman Empire would articulate at the 1897 Venice conference. In the weeks leading up to the conference, memos from the office of the grand vizier explained the need for sending an Ottoman delegation to the conference as part of an effort "to prevent the spread into the [Ottoman Empire] and all of Europe of the plague which is in India,"¹⁰⁸ a clear indication of the Ottoman Empire's perception of itself as an important actor in the global effort to prevent the spread of plague. The Ottoman delegation went on to note that the sanitary measures that the Ottoman state had introduced in response to plague would be ineffective without the Qajars' willingness to adopt similar measures in the Gulf.¹⁰⁹ Moreover, the Ottomans revived a previous proposal calling for the establishment of an Ottoman quarantine station at Faw, arguing that if plague-infested vessels were allowed to reach Basra, neighboring states and Russia would likely be contaminated by plague as well.¹¹⁰ For its part, the British delegation, which since at least the 1880s had come to view any Ottoman attempt to establish a permanent presence at Faw as a threat to British commercial interests in the Gulf, argued that Faw was an unsuitable location for a quarantine station because it lacked potable water, firm soil, and sanitary conditions.¹¹¹ Unfortunately for the Ottomans' efforts to define the Gulf's

sanitary regime, the Venice conference's resulting convention made no mention of Faw, calling instead for a quarantine station "in the vicinity of Basra in a place to be determined."¹¹² Nevertheless, despite this setback, the Ottoman delegation signed the 1897 convention *ad referendum*, meaning subject to the final approval of the Ottoman government itself.¹¹³ Not until 1899 would the Ottoman Empire officially ratify the 1897 Venice convention.¹¹⁴

However, in the intervening period, between the years 1897 and 1899, the Ottoman Empire took it upon itself to dictate sanitary policy in the Gulf on its own terms with little to no regard for British objections, suggesting an Ottoman effort to exercise greater influence in Gulf affairs. In April 1898, for example, British officials complained when a vessel from the Bombay and Persian Steam Navigation Company was detained at the quarantine station at Basra despite having arrived from Aden, which had been declared a "clean port," and not having touched any Gulf ports on its way to Basra.¹¹⁵ In another instance, British officials complained when quarantine officials at Basra carried out a sanitary inspection of a British vessel despite the vessel's surgeon having provided Ottoman authorities with a certificate detailing the number of individuals sick on board and the disease from which they were suffering.¹¹⁶ In 1898, the Ottoman state increased its military presence near Basra in order to apprehend individuals from plague-infected locations who had evaded Ottoman quarantine measures by entering the Ottoman Empire overland through Kuwait.¹¹⁷ In that same year, Ottoman officials also notified British officials that British Indian vessels with cases of plague or new casualties would be repelled from the port of Basra after landing their cargo.¹¹⁸ And in 1899, Ottoman attempts to establish quarantine stations on the Arab coast of the Gulf were criticized by British officials.¹¹⁹

As Frederick Anscombe rightly points out with respect to the Gulf, the Ottoman Empire was "the most important regional state in the pre-World War I period."¹²⁰ The Ottomans' ability to frustrate British interests in the Gulf during the initial years of the Third Plague Pandemic demonstrates the extent of that importance. Granted, international pressure in 1903 eventually forced the Ottoman Empire to abandon control of quarantine operations as far as the Strait of Hormuz and to begin cooperating instead with British-run quarantine stations in the Gulf.¹²¹ Nevertheless, as late as 1911, Kasım İzzedin, an Ottoman health official in charge of overseeing Ottoman sanitary measures in the Gulf region, reflected on the spread of cholera and plague in the Gulf, noted the Ottoman Empire's vulnerability to these sanitary threats on account of its proximity to British India, and insisted on several reforms to the Ottoman Empire's existing sanitary regime in the Gulf, including the establishment of new Ottoman sanitation offices further into the Gulf in places such as Kuwait, Qatif, and Qatar.¹²² To be sure, the previous decade had been one of intense geopolitical competition in the Gulf between France, Russia, Germany, Britain, and the Ottoman Empire.¹²³ But, given the history of epidemic diseases entering the Ottoman Empire through the Gulf during much of the 19th century, it is little wonder that the Ottoman state would continue to focus its efforts on defining the sanitary regime in the Gulf and exerting its influence in the region as it entered the 20th century. If anything, the geopolitical context only heightened the importance of achieving that task.

CONCLUSION

As this article has demonstrated, the cholera and plague pandemics of the 19th and early 20th centuries shaped Ottoman state-building and expansionist efforts in Iraq and the Gulf in significant ways. For Ottoman officials, these pandemics brought attention to the possible role of Qajar and British subjects in spreading cholera and plague, as well the relationship between Iraq's ecology and recurring outbreaks. These developments paved the way for the expansion of Ottoman health institutions, such as quarantines, and the emergence of new conceptions of public health in the region. Specifically, quarantines proved instrumental not only to the delineation of the Ottoman–Qajar border, but also to defining an emerging Ottoman role in shaping Gulf affairs. Moreover, the Ottomans' use of quarantines and simultaneous efforts to develop sanitary policies informed by local ecological realities signal a localized and ad hoc approach to disease prevention that has been overlooked. Ultimately, this study demonstrates that environmental factors operating on global and regional scales were just as important as geopolitical factors in shaping Ottoman rule in Iraq and the Gulf during the late Ottoman period.

NOTES

Author's note: Funding for this research was provided by The Academic Research Institute in Iraq and the Ohio State University's Mershon Center for International Security Studies and Office of International Affairs. For their help and encouragement during various stages of research and writing, I express my sincere gratitude to Carter V. Findley, Samuel Dolbee, Jim Harris, Michael Christopher Low, Elizabeth Perego, Nükhet Varlık, Sam White, Camille Cole, Dianne G. Delima, Jeffrey Dyer, Moshe Matus, Doğa Öztürk, and Benjamin Smuin. For their feedback on earlier versions of this paper, I also thank the three anonymous *IJMES* reviewers, the journal's editorial board, and the participants of the Great Lakes Ottomanist Workshop (York University, 2016) and the Indian Ocean World Centre's conference on "Disease and Dispersion in the Indian Ocean World" (McGill University, 2016).

¹For general information on patterns of trade and merchant networks in this region, see Halil İnalçık, "The India Trade," in *An Economic and Social History of the Ottoman Empire, 1300–1914*, ed. Halil İnalçık and Donald Quataert (Cambridge: Cambridge University Press, 1994), 349–55; Suraiya Faroqhi, "Trade: Regional, Inter-Regional and International," in *An Economic and Social History of the Ottoman Empire, 1300–1914*, 524–25; Rudi Matthee et al, *The Monetary History of Iran: From the Safavids to the Qajars* (London: I.B.Tauris, 2013); Dina Rizk Khoury, *State and Provincial Society in the Ottoman Empire: Mosul 1540–1834* (Cambridge: Cambridge University Press, 1997), 33–37; Thabit Abdullah, *Merchants, Mamluks, and Murder: The Political Economy of Trade in Eighteenth-Century Basra* (Albany, N.Y.: State University of New York Press, 2001), 57–82; and Hala Fattah, *The Politics of Regional Trade in Iraq, Arabia, and the Gulf, 1745–1900* (Albany, N.Y.: State University of New York Press, 1997), 63–90.

²Suraiya Faroqhi, *Pilgrims and Sultans: The Hajj under the Ottomans, 1517–1683* (London: I.B.Tauris, 1994), 135–39, 144; Yitzhak Nakash, *The Shi'is of Iraq* (Princeton, N.J.: Princeton University Press, 1994), 163–65, 167; Sabri Ateş, "Bones of Contention: Corpse Traffic and Ottoman–Iranian Rivalry in Nineteenth-Century Iraq," *Comparative Studies of South Asia, Africa and the Middle East* 30 (2010): 512–32.

³On the geography of this region as it pertains to the Euphrates and Tigris rivers, see M.G. Ionides, *The Régime of the Rivers, Euphrates and Tigris* (London: Spon, 1937).

⁴On geopolitical conflicts arising out of competing economic interests, see İnalçık, "The India Trade," 335–40; Giancarlo Casale, *The Ottoman Age of Exploration* (Oxford: Oxford University Press, 2010), 84–116; and Camille Lyans Cole, "Precarious Empires: A Social and Environmental History of Steam Navigation on the Tigris," *Journal of Social History* 50 (2016): 74–101. On the geopolitical dimensions of sectarianism, see Gökhan Çetinsaya, *The Ottoman Administration of Iraq, 1890–1908* (London: Routledge, 2006), 99–126; and Selim Deringil, "The Struggle against Shiism in Hamidian Iraq: A Study in Ottoman Counter-Propaganda," *Die Welt des Islams* 30 (1990): 45–62. For an overview of Ottoman–Persian conflicts in this frontier region, see Firoozeh Kashani-Sabet, *Frontier Fictions: Shaping the Iranian Nation, 1804–*

1946 (Princeton, N.J.: Princeton University Press, 1999), 23–30; and Sabri Ateş, *The Ottoman–Iranian Borderlands: Making a Boundary, 1843–1914* (Cambridge: Cambridge University Press, 2013).

⁵Faisal Husain, “In the Bellies of the Marshes: Water and Power in the Countryside of Ottoman Baghdad,” *Environmental History* 19 (2014): 638–64; Husain, “Changes in the Euphrates River: Ecology and Politics in a Rural Ottoman Periphery, 1687–1702,” *Journal of Interdisciplinary History* 47 (2016): 1–25.

⁶Ateş, *The Ottoman–Iranian Borderlands*, 63–66.

⁷Çetinsaya, *Ottoman Administration of Iraq*, 128; Frederick F. Anscombe, *The Ottoman Gulf: The Creation of Kuwait, Saudi Arabia, and Qatar* (New York: Columbia University Press, 1997), 26–42; Zekeriyâ Kurşun, *The Ottomans in Qatar: A History of Anglo-Ottoman Conflicts in the Persian Gulf* (Istanbul: ISIS, 2002), 49–63.

⁸Ateş, *The Ottoman–Iranian Borderlands*, 229–35.

⁹For examples of late Ottoman expansionist efforts in Africa and Yemen, see Thomas Kuehn, *Empire, Islam, and the Politics of Difference: Ottoman Rule in Yemen, 1849–1919* (Leiden: Brill, 2011); and Mostafa Minawi, *The Ottoman Scramble for Africa: Empire and Diplomacy in the Sahara and the Hijaz* (Stanford, Calif.: Stanford University Press, 2016).

¹⁰For the history of cholera and plague during the 19th and 20th centuries, see Christopher Hamlin, *Cholera: A Biography* (Oxford: Oxford University Press); and Myron Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York: New York University Press, 2007). For case studies from the Ottoman Empire, see Mesut Ayar, *Osmanlı Devletinde Kolera: İstanbul Örneği (1882–1895)* (Istanbul: Kitabevi, 2007); Michael Christopher Low, “Empire and Hajj: Pilgrims, Plagues, and Pan-Islam under British Surveillance, 1865–1908,” *International Journal of Middle East Studies* 40 (2008): 269–90; Low, “Ottoman Infrastructures of the Saudi Hydro-State: The Technopolitics of Pilgrimage and Potable Water in the Hijaz,” *Comparative Studies in Society and History* 57 (2015): 929–74; Gülden Sarıyıldız, *Hicaz Karantina Teşkilatı, 1865–1914* (Ankara: Türk Tarih Kurumu Basımevi, 1996); Andrew Robarts, *Migration and Disease in the Black Sea Region: Ottoman-Russian Relations in the Late Eighteenth and Early Nineteenth Centuries* (London: Bloomsbury, 2017); and Daniel Panzac, *La Peste dans L’Empire Ottoman, 1700–1850* (Leuven: Éditions Peeters, 1985). On the usefulness of considering epidemiological factors for understanding wider geopolitical developments, see John Robert McNeill, *Mosquito Empires: Ecology and War in the Great Caribbean, 1620–1914* (New York: Cambridge University Press, 2010); and Aaron Shakow, “Marks of Contagion: The Plague, the Bourse, the Word and the Law in the Early Modern Mediterranean, 1720–1762” (PhD diss., Harvard University, 2009).

¹¹Ateş, “Bones of Contentment”; Birsen Bulmuş, *Plague, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh: Edinburgh University Press, 2012), 155–160; Firoozeh Kashani-Sabet, “‘City of the Dead’: The Frontier Polemics of Quarantines in the Ottoman Empire and Iran,” *Comparative Studies of South Asia, Africa and the Middle East* 18 (1998): 51–58; and Samuel Dolbee, “The Locust and the Starling: People, Insects, and Disease in the Late Ottoman Jazira and After, 1860–1940” (PhD diss., New York University, 2017), 209–57. On Ottoman public health efforts in 19th-century Baghdad, see Burcu Kurt, “Osmanlı Doğu Sınırında Kamu Sağlığı ve Siyaset: 19. Yüzyıl Bağdad’ında Hastaneler,” in *Osmanlı’dan Cumhuriyet’e Salgın Hastalıklar ve Kamu Sağlığı*, ed. Burcu Kurt and İsmail Yaşayanlar (Istanbul: Tarih Vakfı, 2017), 143–68.

¹²On the concept of legibility and its relationship to disease prevention, see James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, Conn.: Yale University Press, 1998), 1–8, 77.

¹³Minawi, *The Ottoman Scramble*, 17 and conclusion.

¹⁴For an overview of major epidemics in the Ottoman Empire before the 19th century, see Panzac, *La Peste; Nükhet Varlık, Plague and Empire in the Early Modern Mediterranean World: The Ottoman Experience, 1347–1600* (Cambridge: Cambridge University Press, 2015); and Sam White, *The Climate of Rebellion in the Early Modern Ottoman Empire* (Cambridge: Cambridge University Press, 2011), 85–91.

¹⁵Varlık, *Plague and Empire*, 177–78, 198, 202.

¹⁶These outbreaks occurred in 1674–75, 1739–40, and 1773–74. See Yasin al-‘Umari, *Ghayat al-Maram fi Tarikh Mahasin Baghdad Dar al-Salam*, ed. ‘Ali Yusuf al-Basri (Baghdad: Dar Manshurat al-Basri, 1968), 320–21. Al-‘Umari uses the word *tā’un* when discussing these outbreaks. On the complications arising from translating the word *tā’un* as “plague,” see Varlık, *Plague and Empire*, 11–12; and White, *The Climate of Rebellion*, 86.

¹⁷On malaria as a problem in Basra, see Abdullah, *Merchants, Mamluks, and Murder*, 13. For a sampling of accounts from European officials, travelers, and merchants, see Pedro Teixeira, *The Travels of Pedro Teixeira*, trans. William F. Sinclair (London: Hakluyt Society, 1902), 29; Abraham Parsons, *Travels in Asia and Africa* (London: Longman, Hurts, Rees, and Orme, Paternoster-Row, 1808), 157; Domenico Sestini, *Voyage de Constantinople à Bassora en 1781 par le Tigre et l'Euphrate* (Paris: Dupuis, 1798), 190–91; British Library, India Office Records, London, United Kingdom (hereafter IOR)/G/29/21, La Touche to Board of Control, 1 July 1780; and IOR/G/29/23, Jones to Manesty, 1 November 1793. On continuity and change in state approaches to malaria during the late Ottoman period and early Turkish Republic, see Kyle T. Evered and Emine Ö. Evered, “Governing Population, Public Health, and Malaria in the Early Turkish Republic,” *Journal of Historical Geography* 37 (2011): 470–82.

¹⁸Hamlin, *Cholera*, 10; J. N. Hays, *Epidemics and Pandemics: Their Impacts on Human History* (Santa Barbara, Calif.: ABC-CLIO, 2005), 193–95.

¹⁹According to J. N. Hays, cholera did not appear in the Gulf until 1822. See Hays, *Epidemics and Pandemics*, 193. However, archival evidence from the India Office Records demonstrates that cholera arrived to the Gulf by 1821. See IOR/P/385/10, Jukes (Political Agent) to Bombay Government, 14 July 1821, pp. 5543–44; IOR/P/385/10, Jukes (Political Agent) to Bombay Government, 20 July 1821, pp. 5537; and IOR/P/385/11, Jukes (Political Agent) to Bombay Government, 1 September 1821, p. 5894.

²⁰*Salname-i Vilayet-i Basra* (Basra: Basra Vilayeti Matbaası, 1318/[1900–1901]), 193–94.

²¹Sam White, “Rethinking Disease in Ottoman History,” *International Journal of Middle East Studies* 42 (2010): 549–67.

²²Uthman al-Basri, *Matali' al-Su'ud bi-Tib Akhbar al-Wali Dawud: Tarikh al-'Iraq wa-Najd* (Beirut: al-Dar al-'Arabiyya li-l-Mawsu'at, 2010), 482.

²³Resul Kerkuklü Efendi, *Dehvat ül-Vüzerâ: Gülşen-i Hulefa Zeylîdir* (Baghdad: Dar al-Tiba'a, 1246/[1830]), 351.

²⁴*Ibid.*, 351.

²⁵James B. Fraser, *Narrative of a Journey into Khorasan in the Years 1821 and 1822* (London: Longman, Hurst, Rees, Orme, Brown, and Green, 1825), 66.

²⁶These developments are described and examined in Varlık, *Plague and Empire*, 248–91.

²⁷Panzac, *La Peste*, 446–56; Yaron Ayalon, *Natural Disasters in the Ottoman Empire: Plague, Famine, and Other Misfortunes* (New York: Cambridge University Press, 2015), 184.

²⁸A translated copy of Davud Paşa's letter can be found in IOR/P/385/17, translated letter from Davud Paşa to Bombay Government, pp. 268–70. Unfortunately, I was unable to locate Davud Paşa's original letter, which I presume to have been written in Ottoman Turkish. Although no date appears on the letter, the index for these proceedings mentions that Davud Paşa's letter was dated 1822. See, IOR/Z/P/3422, pp. 26. All quotations from this letter rely on the available translation.

²⁹*Ibid.*

³⁰Ayalon, *Natural Disasters*, 186.

³¹Stephen Hemsley Longrigg, *Four Centuries of Modern Iraq* (Oxford: Clarendon Press, 1925), 255. On Georgian mamluk rule in Baghdad, see Tom Nieuwenhuis, *Politics and Society in Early Modern Iraq: Mamluk Pasha, Tribal Shaykhs and Local Rule Between 1802 and 1831* (The Hague: Martinus Nijhoff, 1982); and Thomas Lier, *Haushalte and Haushaltspolitik in Bagdad, 1704–1831* (Würzburg: Erlong Verlag, 2004).

³²Despite my best efforts, I was unable to locate in the Prime Ministry's Ottoman Archives any correspondence between the Ottoman central government and Davud Paşa on the subject of the cholera crisis at Basra. This, of course, does not mean that such correspondence does not exist.

³³Ayar, *Osmanlı Devletinde Kolera*, 10n30.

³⁴On the ways in which the Ottoman experience with plague can help us rethink conventional periodizations of the three known plague pandemics, see Nükhet Varlık, “New Science and Old Sources: Why the Ottoman Experience of Plague Matters,” *The Medieval Globe* 1 (2014): 193–227.

³⁵IOR/P/386/40, No. 44, Bombay Castle to Medical Board, 9 September 1828.

³⁶Başbakanlık Osmanlı Arşivi (Prime Ministry's Ottoman Archive), Istanbul, Turkey (hereafter BOA), HAT 462/22642A, 29 Z 1246/10 June 1831; and BOA, HAT 395/20864R, 7 M 1247/18 June 1831.

³⁷BOA, HAT 392/20794, 5 L 1247/8 March 1832; and BOA, HAT 393/20825, 25 Za 1247/26 April 1832.

³⁸Centre des Archives Diplomatiques de Nantes, Nantes, France (hereafter CADN), Constantinople D, Baghdad vol. 9, No. 11, Beuscher to Varenne, 26 April 1832.

³⁹Ayalon, *Natural Disasters*, 187.

⁴⁰The Anglo-Turkish Convention (or Treaty of Balta Limanı) (1838), which the Ottoman Empire signed in exchange for British support in the Ottoman central government's struggle against the Ottoman governor of Egypt, Mehmed Ali Paşa, eliminated state monopolies and reduced tariffs for European merchants. For more on the treaty and its importance in late Ottoman history, see Donald Quataert, "Overview of the Nineteenth Century," in *An Economic and Social History of the Ottoman Empire, 1300–1914*, 764.

⁴¹On the epidemiological and economic concerns informing the Ottoman Empire's decision to adopt quarantines, see Bulmuş, *Plague*, 97–129.

⁴²*Ibid.*, 4, 99.

⁴³*Ibid.*, 130–51. On 19th-century European debates concerning the efficacy of quarantines and their hindrance to the free flow of commerce, see Erwin H. Ackerknecht, "Anticontagionism between 1821 and 1867," *International Journal of Epidemiology* 38 (2009): 7–21.

⁴⁴Ayalon, *Natural Disasters*, 186–92.

⁴⁵The National Archives, Kew, United Kingdom (hereafter TNA), FO 195/334, No. 3, Rawlinson to Canning, 16 January 1849.

⁴⁶TNA, 195/237, No. 52, Rawlinson to Wellesley, 30 September 1846.

⁴⁷TNA, FO 195/272, No. 70, Kemball to Cowley, 15 September 1847; BOA, I.DH 157/6174, 14 Za 1263/34 October 1847.

⁴⁸TNA, FO 195/367, No. 18, Kemball to Canning, 2 July 1851; BOA, I.DH 238/14410, 22 L 1267/20 August 1851; TNA, FO 195/367, No. 26, Kemball to Canning, 23 September 1851.

⁴⁹TNA, FO 195/237, No. 60, Rawlinson to Wellesley, 25 November 1846.

⁵⁰*Salname-i Nezaret-i Hariciye, 1318* (Istanbul: Matbaa-i Osmaniye, 1318/[1900–1901]), 454.

⁵¹BOA, A.DVN.MHM 5A/71, 29 C 1264/2 June 1848.

⁵²For a history of the international sanitary conferences and Ottoman participation, see Bulmuş, *Plague*, 130–74; Peter Baldwin, *Contagion and the State in Europe, 1830–1930* (Cambridge: Cambridge University Press, 1999); and Valeska Huber, "The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851–1894," *The Historical Journal* 49 (2006): 453–76.

⁵³Ministère des Affaires Étrangères, *Procès-Verbaux de la Conférence Sanitaire Internationale Ouverte a Paris le 27 Juillet 1851* (Paris: Imprimerie Nationale, 1852), No. 14: 4–5 (4 October 1851).

⁵⁴*Ibid.*, 14: 5–6.

⁵⁵CADN, Constantinople D, Baghdad, vol. 13, No. 70, Guerrier to de La Cour, 8 October 1853; TNA, FO 195/521, No. 32, Kemball to Redcliffe, 11 October 1856.

⁵⁶*Salname-i Nezaret-i Hariciye*, 464.

⁵⁷Mark Harrison, *Contagion: How Commerce Has Spread Disease* (New Haven, Conn.: Yale University Press, 2012), 139–44.

⁵⁸On the history of Ottoman quarantine procedures in the Red Sea region, see Gülden Sarıyıldız and Oya Dağlar Macar, "Cholera, Pilgrimage, and International Politics of Sanitation: The Quarantine State on the Island of Kamaran," in *Plague and Contagion in the Islamic Mediterranean*, ed. Nükhbet Varlık (Kalamazoo, Mich.: Arch Humanities Press, 2017), 243–73.

⁵⁹[Ottoman Empire], *Procès-Verbaux de la Conférence Sanitaire Internationale ouverte a Constantinople le 13 Février 1866*, vol. 1 (Constantinople [Istanbul]: Imprimerie Centrale, 1866), No. 14: 16–17 (9 June 1866); [Ottoman Empire], *Procès-Verbaux de la Conférence Sanitaire Internationale ouverte a Constantinople*, vol. 1, No. 15: 6 (11 June 1866). The geopolitical implications of this phenomenon are explored in Ateş, "Bones of Contentment."

⁶⁰[Ottoman Empire], *Procès-Verbaux de la Conférence Sanitaire Internationale ouverte a Constantinople*, vol. 1, No. 34: 5–6 (30 August 1866). For more on Qajar approaches to public health and disease prevention, see Hormoz Ebrahimnejad, *Medicine, Public Health and the Qajar State: Patterns of Medical Modernization in Nineteenth-Century Iran* (Leiden: Brill, 2004); and Willem Floor, *Public Health in Qajar Iran* (Washington, D.C.: Mage Publishers, 2004).

⁶¹[Ottoman Empire], *Procès-Verbaux de la Conférence Sanitaire Internationale ouverte a Constantinople*, vol. 1, No. 35: 3–4 (8 September 1866).

⁶²*Ibid.*, No. 35: 5 (8 September 1866).

⁶³TNA, FO 195/1371, telegram, no number, Plowden to Dickson, 17 October 1881.

⁶⁴TNA, FO 195/1409, No. 1, Plowden to the Earl of Dufferin, 4 January 1882.

⁶⁵TNA, FO 195/1445, No. 46, Tweedie to Wyndham, 5 September 1883.

- ⁶⁶TNA, FO 195/1445, No. 55, Tweedie to the Earl of Dufferin, 22 November 1883.
- ⁶⁷TNA, FO 195/1478, No. 25, Plowden to the Earl of Dufferin, 10 January 1884.
- ⁶⁸TNA, FO 195/1579, No. 41/5, Bowman to White, 17 January 1887.
- ⁶⁹TNA, FO 195/1611, No. 464/77, Talbot to White, 30 June 1888.
- ⁷⁰James Onley, *The Arabian Frontier of the British Raj: Merchants, Rulers, and the British in the Nineteenth-Century Gulf* (Oxford: Oxford University Press, 2007), 29–38; Johan Mathew, *Margins of the Market: Trafficking and Capitalism across the Arabian Sea* (Oakland, Calif.: University of California Press, 2016), 82–112.
- ⁷¹Bulmuş, *Plague*, 152.
- ⁷²For examples from the Hijaz, see Low, “Ottoman Infrastructures”; and Low, “The Mechanics of Mecca: The Technopolitics of the Late Ottoman Hijaz and the Colonial Hajj” (PhD diss., Columbia University, 2015), 214–28. Samuel Dolbee has also demonstrated that, while the Ottoman state embraced the bacteriological revolution, notions regarding the role of miasma in spreading diseases continued to hold sway in certain parts of the Ottoman Empire. Dolbee, “The Locust and the Starling,” 230–24.
- ⁷³For the Ottomans’ use of quarantines in specific contexts, see Bulmuş, *Plague*, 97–151; Low, “The Mechanics of Mecca,” 158–229; Saryıldız, *Hicaz Karantina*; Robarts, *Migration and Disease*, 109–38; and Alan Mikhail, *Nature and Empire in Ottoman Egypt: An Environmental History* (Cambridge: Cambridge University Press, 2011), 230–41.
- ⁷⁴Mark Harrison, *Disease and the Modern World: 1500 to the Present Day* (Cambridge: Polity, 2004), 102.
- ⁷⁵On the importance of studying diseases as part of broader environmental factors, see Alan Mikhail, “The Nature of Plague in Late Eighteenth-Century Egypt,” *Bulletin of the History of Medicine* 82 (2008): 249–75.
- ⁷⁶Mehmed Hurşid [Paşa], *Seyâhanâme-i Hudûd*, ed. Alaattin Eser (Istanbul: Simurg Kitapçılık ve Yayıncılık, 1997), 8.
- ⁷⁷Chris Gratien, “The Ottoman Quagmire: Malaria, Swamps, and Settlement in the Late Ottoman Mediterranean,” *International Journal of Middle East Studies* 49 (2017): 583–604.
- ⁷⁸BOA, DH.MKT 1650/17, 24 Z 1306/21 August 1889.
- ⁷⁹BOA, DH.MKT 1657/14, 19 M 1307/15 September 1889; BOA, DH.MKT 1666/78, 18 S 1307/14 October 1889; BOA, DH.MKT 1670/54, 3 Ra 1307/28 October 1889; BOA, DH.MKT 1672/21, 12 Ra 1307/6 November 1889; BOA, DH.MKT 1678/40, 8 R 1307/2 December 1889.
- ⁸⁰TNA, FO 195/1467, No. 457/49, Tweedie to White, 22 August 1889.
- ⁸¹Harrison, *Contagion*, 172.
- ⁸²Şerifüddin bin Arif, *Basra Şehri Hakkında Topografya-ı Tıbbi* (Istanbul: Mahmud Bey Matbaası, 1309/[1891–92]), 2. On the Ottoman Medical Society, see Emre Karacaoğlu, “Cemiyet-i Tıbbiye-i Osmaniye Toplantısında Sunulan Bir Tıp Tarihi Makalesi: Terakkiyat-i Tıbbiye,” *Türk Klinikleri: Tıp Etiği-Hukuku-Tarihi* 24 (2016): 44–54.
- ⁸³Arif, *Basra Şehri*, 14.
- ⁸⁴*Ibid.*, 33.
- ⁸⁵Apparently, portions of this report were published earlier in the Ottoman periodical *Tercüman-ı Hakikat*. *Ibid.*, 14–15.
- ⁸⁶*Basra Vilayeti Salnamesi* (Basra: Basra Matbaası, 1309/[1891–92]), 104–57.
- ⁸⁷*Ibid.*, 115.
- ⁸⁸*Ibid.*, 118.
- ⁸⁹TNA, FO 195/1978, No. 379/33, Mockler to Ford, 31 May 1893; TNA, FO 195/1979, No. 589/77, Mockler to Ford, 28 August 1893.
- ⁹⁰BOA, BEO 349/26129, 15 Kanunusani 1309 / 27 January 1894.
- ⁹¹On Mehmed Şakir’s life and career, see Mehmed Şakir Bey, *Halife II. Abdülhamid’in Hac Siyaseti*, ed. Gülşen Saryıldız (Istanbul: Tımas, 2009), 9–17.
- ⁹²Mehmed Şakir, “Hindistan Kolerası ve Irak’ın Islahat-ı Sıhhiyesi,” İstanbul Üniversitesi Nadir Eserler Kütüphanesi (hereafter İÜNEK), Ms. No. TY 5071, 255–57.
- ⁹³*Ibid.*, 265.
- ⁹⁴*Ibid.*, 434.
- ⁹⁵*Ibid.*, 438–40.
- ⁹⁶*Ibid.*, 220–28.
- ⁹⁷BOA, A.MKT.MHM 579/8, Ministry of Health to Grand Vizier, 6 Ca 1317 / 30 September 1899.

⁹⁸BOA, I.SH 4/29, 27 R 1322 / 13 July 1904. Hamdi Aziz, *Suriye Kit'astyla Zor Sancağı ve Hitta-ı İrakiye'de Kolera İstila'âtı, 1318 ila 1320* (Baghdad, 1321/[1905–6]), 2. Internal evidence in the report itself suggests that the publication date of 1321 should be treated as a Rumi date.

⁹⁹Ibid., 11–13, 28–37.

¹⁰⁰Ibid., 15–16

¹⁰¹On the pandemic's effects on Chinese society, see Carol Benedict, *Bubonic Plague in Nineteenth-Century China* (Stanford, Calif.: Stanford University Press, 1999).

¹⁰²A developed literature exists on the unsettling effects of plague's appearance in British India and the global panic that they created. See David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley, Calif.: University of California Press, 1993); Rajnarayan Chandavarkar, "Plague Panic and Epidemic Politics in India, 1896–1914," in *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*, ed. Terence Ranger and Paul Slack (Cambridge: Cambridge University Press, 1992), 204–6; and I. J. Catanach, "The 'Globalization' of Disease? India and the Plague," *Journal of World History* 12 (2001): 131–53.

¹⁰³Harrison, *Contagion*, 140–41.

¹⁰⁴Ministère des Affaires Étrangères, *Conférence Sanitaire Internationale de Venise, 16 Février-19 Mars 1897: Procès-Verbaux* (Rome: Forzani et Imprimeurs du Sénat, 1897), 42.

¹⁰⁵TNA, FO 195/1935, Enclosure, Dr. Lubicz to Mockler, 5 October 1896 in No. 468/84, Mockler to Currie, 6 October 1896.

¹⁰⁶BOA, A.MKT.MHM 573/14, Office of Grand Vizier to Baghdad and Basra, 4 Kanununevvel 1312/16 December 1896.

¹⁰⁷BOA, A.MKT.MHM 573/14, Office of Grand Vizier to various ministries, 19 Kanununevvel 1312/31 December 1896.

¹⁰⁸BOA, A.MKT.MHM 573/14, Office of Grand Vizier to Ministry of Health, 9 Kanunusani 1312/ 25 January 1897.

¹⁰⁹Ministère des Affaires Étrangères, *Conférence Sanitaire Internationale de Venise*, 334.

¹¹⁰Ibid., 385.

¹¹¹Ibid. For Ottoman efforts to establish a greater presence at Faw, see Çetinsaya, *Ottoman Administration of Iraq*, 130–36.

¹¹²Ministère des Affaires Étrangères, *Conférence Sanitaire Internationale de Venise*, 246.

¹¹³Ibid., 212.

¹¹⁴BOA, I.SH 3/15, 21 Zilkade 1316/2 April 1899; TNA, FO 195/2050, No. 28, Dickson to O'Conor, 24 March 1899.

¹¹⁵TNA, FO 195/2020, No. 182/25, Cowler to Currie, 25 April 1898.

¹¹⁶TNA, FO 195/2020, No. 590/90, Mendeville to O'Conor, 24 November 1898.

¹¹⁷TNA, FO 195/2020, No. 342/52, Ramsay to Bunsen, 20 July 1898.

¹¹⁸TNA, FO 195/2020, No. 214/30, Cowler to Currie, 11 May 1898.

¹¹⁹TNA, FO 195/2050, No. 55, Dickson to O'Conor, 12 May 1899.

¹²⁰Anscombe, *The Ottoman Gulf*, 1.

¹²¹Bulumuş, *Plague*, 156.

¹²²Cassim Izzeddine, *La Défense Sanitaire dans le Golfe Persique* (Paris: A Maloine, 1912), 5–6, 37.

¹²³Onley, *The Arabian Frontier*, 189–90.