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Uncertainty and Managing Randomness: The First Documented Cholera Epidemic in Bombay City and Presidency, 1818-1821

Vivek Neelakantan[1, 2]
[1] *Visiting Fellow Brocher Foundation*
[2] *Indian Institute of Management* , ✉*vivekneelakantanster@gmail.com*

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Abstract: Between 1817 and 1821, the Indian subcontinent was devastated by a series of cholera outbreaks that have subsequently been referred to as the beginning of the First Cholera Pandemic. Although the history of the First Cholera Pandemic has received some scholarly attention, historians tend to overlook the local features of the pandemic in favor of the broader colonial context. In this article, the author contends that the official response to the epidemic in Bombay city and presidency (1818-1821) was initially ameliorative, including recruiting native medical assistants to administer treatment. Such a measure was calculated to cultivate a benevolent image of the colonial government among local inhabitants. Despite considerable nosological and etiological disagreements, members of the Bombay Medical Board characterized cholera as a social disease. Unlike cholera epidemics in the latter half of the nineteenth century, the first cholera epidemic in the Bombay presidency did little to exacerbate antagonism towards the colonial government for two reasons. First, the British power in India was still at its formative stage. Second, both in India and England, cholera was associated with the derangement of bodily humors. On the contrary, the epidemic provided a stimulus to intracommunal discord.

Abstrak: Antara tahun 1817 dan 1821, anak benua India dilanda serangkaian wabah kolera yang kemudian disebut sebagai awal dari Pandemi Kolera Pertama. Meskipun sejarah Pandemi Kolera Pertama telah mendapat perhatian ilmiah, para sejarawan cenderung mengabaikan ciri-ciri lokal dari pandemi ini dan lebih memilih konteks kolonial yang lebih luas. Dalam artikel ini, penulis berpendapat bahwa tanggapan resmi terhadap epidemi di kota dan wilayah kepresidenan Bombay (1818-1821) pada awalnya bersifat perbaikan, termasuk merekrut asisten medis pribumi untuk memberikan pengobatan. Tindakan seperti itu diperhitungkan untuk menumbuhkan citra baik pemerintah kolonial di kalangan penduduk setempat. Meskipun ada perbedaan pendapat nosologis dan etiologis, anggota Dewan Medis Bombay menggolongkan kolera sebagai penyakit sosial. Berbeda dengan epidemi kolera pada paruh kedua abad ke-19, epidemi kolera yang pertama pada masa kepresidenan Bombay tidak banyak memperburuk antagonisme terhadap pemerintah kolonial karena dua alasan. Pertama, kekuatan Inggris di India masih dalam tahap pembentukan. Kedua, baik di India maupun Inggris, kolera dikaitkan dengan gangguan humor tubuh. Sebaliknya, epidemi ini memberikan stimulus terhadap perselisihan antar masyarakat.

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INTRODUCTION

The first globally documented cholera epidemic took place in Jessore (Bengal), situated on the Sunderbans delta, and was reported in August 1817 to have killed at least 10,000 (*The Lancet* 1831-32, pp. 241-84). From the delta, the epidemic spread to the city of Calcutta and subsequently to the remaining parts of Bengal province in a north-westerly direction towards Benares, Lucknow, Cawnpore (Kanpur) and Delhi and then in a southerly direction towards Nagpore (Nagpur). The disease subsequently spread south-westerly in several newly-conquered territories by the British East India Company, towards Poonah (Pune) and Panwell (Panvel). The cholera epidemic in these areas coincided with troop movements following the Third Anglo-Maratha War (1818). A cholera outbreak was reported in Bombay on September 1818 (*The Lancet* 1831-32, p. 246).

The gradual advance of the disease on the island of Bombay (1818) enabled the presidential administration to take remedial action (Public Letter from Bombay 1819, January 7). At the time, the island —divided into separate districts placed under the supervision of Officers of the Medical Department —provided gratuitous distribution of medicine to the native population. Of the medicine administered to 9392 people, 550 died (Bombay Medical Board Report 42 1819, October 14). Police reports of the deaths from Bombay Island's Fort and Blacktown divisions indicated that of the 1255 persons who succumbed to the cholera epidemic between 1818 and 1819, 793 died without any medical assistance (Medical Board Report 42 1819, October 14).

In October 1818—when the disease almost disappeared at Tannah (Thane)—Dr Jukes, a garrison surgeon in the service of the British East India Company, was summoned to examine a critical cholera case within the barracks of the Tannah fort. Within a week, no less than nine cases occurred in the barracks (Bombay Report 1832, pp.57-72). As the barracks were overcrowded and poorly ventilated, the place was emptied of troops, scoured and fumigated, and no further cases of cholera were detected (Bombay Report, 1832, p. 60). By December 1818—with the onset of winter as the Bombay Medical Board became overconfident that the disease was vanishing from the city—new cholera cases on the islands of Bombay and Salsett (Salsette) excited much alarm. In some instances, the disease attacked and destroyed whole families, whilst in others, only a single case (Bombay Report, 1832, p. 60).

The 1817-21 cholera epidemic has received some attention from historians of South Asia. However, the local features of the epidemic remain overlooked in favor of the broader colonial context. *Extant scholarship on the first documented cholera epidemic (1817-21) is fragmentary, and historians have reached divergent conclusions on the significance of the epidemic*. David Arnold notes that cholera was a political disease, threatened the slender basis of British power in India and drew a dividing line between European rulers and their Indian subjects on the question of colonialism (Arnold, 1993). In a similar vein, Arabinda Samanta contends that epidemic cholera in nineteenth-century India marked a widening gulf between indigenous and western medicine. While many Indians sought solace in religious observations rather than medical concoctions, *vaidyas* (practitioners of Ayurveda) and *hakims* (practitioners of Unani) provided their assistance with medicines consistent with restoring the bodily humor of patients (Samanta, 2018, p. 72). However, Samanta's line of argument fails to note that during the early nineteenth century, both Indian and European systems of medicine were based on the principle of restoring bodily humors.

On the contrary, Seema Alavi notes that the 1817 epidemic strengthened the East India Company and the Indian princely states' commitment to what was later in the nineteenth century called public health (Alavi, 2008, p. 26). Nonetheless, the three historians allude to a humanitarian crisis afflicted by the first historically documented cholera epidemic. The pictures of cholera were area-specific, with no data on other areas and the spread.

Bombay medical historian Mridula Ramanna notes that smallpox, cholera and fevers were major killers during the nineteenth century, but their treatment was unknown. These diseases had a place in Indian tradition, while British officials had their theories. Hence, the direction that sanitary work and disease should take was also marked by uncertainty (Ramanna, 2000, pp. 44-55). In a similar vein, Mariam Dossal and Simkie Sarkar attribute cholera outbreaks in nineteenth-century Bombay to inadequate water supply and sanitation (Dossal, 1988; Sarkar 2002). Using the case of Bombay city and presidency, this paper seeks to investigate whether the first documented cholera outbreak conforms to historian charles rosenberg's generalizations about epidemics (Rosenberg 1989). As Rosenberg (1989) pointed out:

> Thus, as a social phenomenon, an epidemic has a dramaturgic form. Epidemics start at a moment in time and proceed on a limited stage in space and duration, follow a plot line of increasing and

> revelatory tension, move to a crisis of individual and collective character, then drift toward closure. In another of its dramaturgic aspects, an epidemic takes on the quality of pageant—mobilizing communities to act out proprietary rituals that incorporate and reaffirm fundamental social values and modes of understanding. It is their public character and dramatic intensity—along with unity of place and time that make epidemics as well suited to the concerns of moralists as to the research of scholars seeking an understanding of the relationship among ideology, social structure, and the construction of particular elves.

An epidemic's "dramaturgic form" consists of four "Acts." In Act I (Progressive Revelation), merchants and commoners are initially unwilling to acknowledge the epidemic due to the possible disruption of institutional and economic interests. Inexorably accumulating deaths bring ultimate, if unwilling, recognition of the epidemic (Boyd, 2020). In Act II (Managing Randomness), collective agreement is sought to manage the epidemic's arbitrariness. These include secular and religious frameworks. Secular frameworks would offer a moral and social explanation concerning the differential susceptibilities of particular individuals to diseases attributed to risk-enhancing behavior (Boyd, 2020). In Act III (Negotiating Public Response), pressure is generated for decisive and visible community response, whilst in Act IV (Subsidence and Retrospection), the incidence of the disease gradually declines, and questions are raised concerning lessons learned from the epidemic (Boyd, 2020).

According to Rosenberg (1966), an epidemic of sufficient severity necessitates responses in every section of society. Values and attitudes—especially in science, religion, traditionalism and innovation—are invariably exhibited during an epidemic. The first documented cholera epidemic in Bombay provides a vantage point to examine not only the poor's material conditions but also the colonial state's interventionist nature and the political constraints that acted upon it.

UNCERTAINTY

Although cholera was first historically documented in 1817 in the Sunderbans delta and subsequently spread in all directions, cholera was around long before the nineteenth century. In the ancient Hippocratic scheme of four humors, health was a balance of four humors: blood, phlegm, black bile and yellow bile, individualized in terms of one's temperament. The expulsion of excess yellow bile (*choler*) was, when severe enough to constitute cholera (*morbus*). prior to Robert Koch's discovery of the comma-shaped cholera bacillus as the causative agent of the disease (1882), when Europeans spoke of having cholera, they meant gastroenteritis or diarrhea. During the early nineteenth century, there were considerable nosological and etiological ambiguities with respect to conceptualizing cholera (Ainslie, 1832). The European characterization of cholera—based on the balance of humors—had parallels in Ayurveda (classical Indian medicine). In India, there seemed to have been various forms of cholera. However, the more virulent ones were identified as *mordechi* in Mahratta (Marathi) dialects along the western coast of India (Macpherson, 1869). The vast majority of cholera names before 1817 were derived from the disease's first and most persistent symptoms.

In 1696, English priest John Ovington, known for his travelogue *A Voyage to Suratt in the Year 1689*, alluded to *mordechine*— a disease characterized by violent vomiting and looseness caused by excessive eating of fish and flesh together. A hot iron clapt cured the disease to the heel of the patient (Ovington 1696, p. 347). Likewise, seventeenth -century Italian adventurer Giovanni Francesco Gemelli Careri mentioned *mordazin* as prevailing in Damann (Daman) near Bombay around 1695 and its treatment by cautery. He noted that the disease the Indians referred to as *mordazin* was a complication of fever, vomiting, weakness, weakness of the limbs and headache (Gemelli, 1700). The disease proceeded from overeating and was cured by burning into the heels with a red-hot spit till the patient felt the heat of the fire. That the locals called *bombarki and naricut* would swell and cause violent pain in the belly. To cure the pain, fire would be applied to the swelling, and those who convalesced would carry the signs of fire on their belly. The Portuguese adopted the native treatment for cholera by cautery (MacPherson, 1872, p. 113). The symptoms of *mordechine* or *mordazin* closely resembled that of cholera.

Prior to the 1818 cholera outbreak, there were limited references to the disease on the island of Bombay. In 1772, cholera was reported as a fairly frequent disease in Bombay (Macpherson 1866-72, pp. 53-82). Extant local names for cholera included *Jurree Murree* (reference found in the Sanskrit medical work Madhow Nidhan refers to a pestilential disease); *Turral* or *Morshee* (Marathi: vomiting and piercing pain in the bowels); and *Visoochi* (Sanskrit: faintness, purging, fatigue, spasms and pain at the pit of the stomach, violent headache and retention of urine). These early descriptions of cholera corre-

sponded closely with descriptions of the 1817-21 cholera epidemic. Nevertheless, the Bombay Medical Board was uninformed about previous outbreaks (Macpherson, 1869, p. 14). The Bombay Medical Board's conceptualization of the nosology of cholera closely corresponded with the symptoms of the disease.

A few discrepancies were noted in the appearance of Cholera Morbus in Bengal and Bombay presidencies between 1817 and 1821, respectively. The bilious remittent fever that accompanied Cholera Morbus in Bengal was largely absent in the Bombay presidency (Preface 1819, pp. XXI-XXII).

According to John MacPherson (1869), in Ayurvedic texts, under the heading of *Ajerna*, there were four kinds of cholera, the worst form of which was a disturbance of the stomach and intestines (Sanskrit: *vidhuna visuchi*). Since ancient times, Sanskrit writers—based on symptoms of the disease known as cholera—disputed whether cholera should be classed among nervous or digestive system diseases. In Java, seventeenth-century Dutch physician Jacob Bontius confused cases of spasmodic cholera with idiopathic tetanus (MacPherson, 1869). In a similar vein, during the 1818 cholera outbreak in Bombay, East India Company Surgeon Clarke Abel noted that the treatments for cholera and tetanus attacks were identical (MacPherson, 1869). The disease commenced with simultaneous vomiting and purging. Patients passed muddy or watery stools. Other symptoms included violent pain in the intestines, with a sensation as if writhing or twisting in knots; spasms of the rectum; and heartburn, which the patients described as a fire consuming their bowels (Anderson, 1819, pp. 354-72). British surgeons noted that vomiting and purging in individual patients could be checked by either administering liberal amounts of opium or large doses of calomel with laudanum.

The Bombay Medical Board regarded bloodletting as an effective panacea against cholera, particularly among the European population inhabiting the city. Majority of the Europeans in Bombay at the time were troops in the prime of their life. On the contrary, as the natives of the city were poorly nourished, bloodletting was an ineffective remedy against the disease (Preface 1819, p. XXXVIII).

Between 1818 and 1821, there was a consensus among physicians concerning cholera's predisposing factors. These factors included rapid atmospheric vicissitudes with respect to temperature and moisture, violent exercises of any kind that induced debility or exhaustion, insufficient clothing and flatulent and indigestible food—especially crude and watery vegetables that undermined the constitution of native inhabitants (Preface 1819, p. XXX; Ranken 1823, pp.1821-32). James Ranken, Surgeon of the Bengal Medical Service, maintained that a crop of bad rice in 1817 was the principal cause of cholera epidemics or *Morbus Oryzeus* worldwide and the prohibition of bad rice in Jessore, the epicenter of the 1817-21 cholera epidemic, led to the cessation of cholera (Ranken 1823, pp. 1821-32). Additionally, an unwholesome diet predisposed individuals to cholera epidemics.

The Bombay Medical Board was equivocal with respect to the influence of climate, bodily constitution and contagion on the transmission of cholera. Epidemic cholera flourished in temperatures between 40 and 100 Fahrenheit, during extreme rainfall and dry season (Bombay Report, 1832, p. 60). Cholera was capable of being transported from one place to another as in the case of ordinary infections. Furthermore, the Bombay Medical Board had observed that in several instances, the disease tended to spread when the first cholera attacks proceeded to fatal termination in instances where they were not counteracted with medicine (Bombay Report, 1832, p. 61). Cholera Morbus was detected in Seroor in July 1818 among Madras *doolie* (palanquin) bearers who had encamped to the west of Cantonment Hill (Medical reports relative to the cholera morbus, no.6 1819, pp. 11-24). The outbreak in Seroor coincided with sultry days and the cool southwest wind. Individuals who succumbed to cholera in Seroor were either those who were poorly clothed and nourished or individuals in whom the perspiratory process had been excited by violent exertion or exposure to the sun (Medical reports relative to the Cholera Morbus, no. 6 1819, p. 12). In such instances, even otherwise healthy persons would succumb to cholera.

On the contrary, Surgeon T. Coats contended that if the distempered state of the atmosphere provided congenial conditions for the spread of cholera, the disease would have spread across India with some regularity. However the cholera epidemic seemed to have traveled gradually along roads (Medical reports relative to the Cholera Morbus, no. 36 1819, pp. 144-55). In 1818, as cholera afflicted Punderpoor (Pandharpur), a Hindu pilgrim center, at least 350 individuals succumbed to the disease (Medical reports relative to the Cholera Morbus, no. 32 1819, p.116). The disease had made its way south-westerly from Jaulna (Jalna) against the monsoon winds (Medical reports relative to the Cholera Morbus, no. 32 1819, p.118). Captain William Henry Sykes, who commanded a British East

India Company regiment during the Third Anglo-Maratha War, asserted that cholera was contagious. The disease manifested itself in particular companies or sets of servants—who were habituated to sit or sleep in the confined space of a small tent—such that the disease was communicated by personal contact (Medical reports relative to the Cholera Morbus, no. 32 1819, p.119).

During the early nineteenth century, European physicians had conjectured variously that cholera was caused by the effect of climate on the soil by providing congenial conditions for the germination of cholera "seed" either by contagion or by transmission through water (Chakrabarti 2010, p. 153). Until the association of cholera with water was firmly entrenched towards the end of the nineteenth century, various theories regarding the causality of cholera were thrown up including linking disease outbreaks to lunar influences or atmospheric changes (Bird 1849, p. 22). Interestingly, the notion of cholera inhabiting the human biliary tract was older than the waterborne theory. James Johnson and James Annesley attempted to produce a pathological map of India. The intestine and biliary tract were seen as the site of tropical diseases especially fevers and cholera (Johnson 1818). The human body was seen as a microcosm of the environment and social and environmental factors were seen to be responsible for bodily decay (Chakrabarti 2010, p. 154). The decay pattern seemed to manifest differently in Europeans and Indians due to differences in habits and constitutions. Johnson believed Europeans in India were susceptible to biliary disorders as their bodies were poorly equipped to cope with tropical heat.

Prior to 1830, cholera had been seen only by physicians in India. As it moved west, beginning in the 1820s, it attracted increasing interest. Not surprisingly, given the inadequate etiological knowledge of cholera at the time, explanations of the disease were based as much upon empiricism as moral analysis (Rosenberg 1966, pp. 452-63). Missionaries in India and Europe were unanimous that individuals who succumbed to cholera, had predisposed themselves to the disease, and had somehow compromised their constitution (see Kennedy 1827, p. 11; Rosenberg 1966, p. 456). According to their interpretation, drinking, overeating, or sexual excess might dissipate individuals' vital forces and leave them vulnerable to cholera. Christian Missionaries explained the moral lessons of cholera in terms of physiological mechanisms.

MANAGING RANDOMNESS

"Managing Randomness" refers to seeking collective agreement on an explanatory framework to manage the epidemic's arbitrariness (Boyd 2020). Such frameworks during the early nineteenth century were not only religious but also moral and social to contextualize the differential susceptibility of particular individuals to the epidemic. Epidemics also suggested to peasants and other subaltern classes the deviation of the colonial government from moral order (Chakrabarty 2012).

One of the most striking incidents of the 1817-21 cholera epidemic was the disease outbreak amongst British East India Company troops assembled in Bundelkhand in central India in November 1817 for a campaign against the Pindaris. The Pindaris were scattered bands of freebooters who raided eastern and central India after the Maratha wars and against the Marathas themselves (Arnold 1993, p. 169). When Warren Hastings' troops were afflicted with cholera in Bundelkhand, commoners saw it as a sign that white soldiers had ignored the admonitions of a brahmin and had eaten beef in a grove sacred to Hurdoul Lal, son of a former local chieftain. As the British had ignored the Hindu taboo on consuming beef and violated the sacred grove's sanctity, the resultant cholera epidemic was seen as a divine retribution. The offended Hurdoul Lal was thereafter worshipped in Bundelkhand whenever the region was threatened with cholera outbreaks (Arnold 1986, p. 128).

Although cholera was present in India prior to the nineteenth century, the disease was not elaborately ritualized like smallpox. The fear of cholera and resultant sufferings led to the ritualization of the disease in deltaic Bengal. By 1817, a shrine dedicated to Oola Bibi (Lady of the Flux) was inaugurated at Kidderpore in Bengal (Elliot Walter 1893). The goddess was probably associated with a host of diarrheal diseases and not just cholera as the disease was known since the nineteenth century. Instances of the incarnation of the cholera deity surfaced in Bombay presidency (Rai 2023, p. 68). The cholera goddess was known variously across *Bombay presidency as Berāī (Gujarat), Margai, Myrebai, Mari Aai, and Jurree Murree (Zurree Murree) respectively*.

In Kolhapur, when cholera afflicted villages, locals would install the idol of Margai at the crossroads and worship her with offerings of coconuts, lemons, conjee (gruel), cooked rice and yogurt. After worshipping the goddess for eight days, a *bali* (sacrifice of a male buffalo) would be undertaken, the idol of the cholera goddess would be paraded through the village and thrown away beyond the

village boundary with an offering (Jackson and Enthoven 1915). In the Kolaba and Tannah districts of Bombay presidency, Jurree Murree was worshipped annually by peasants (Campbell 1885, p. 143). Villagers in these districts would attribute the prevalence of cholera to some defect in their ritual offerings to the goddess. In order to propitiate Jurree Murree, villagers would consult a *bhagat* or medium who would in turn recommend offerings of rice, fruits and goats to the cholera goddess and escort her to the neighboring village. A goat would be sacrificed before the Jurree Murree idol, its head would be placed in a bamboo basket and taken to the neighboring village by the medium who in turn would hand over the bamboo basket to the chief (*patil*) of the neighboring village. The *patil* would bury the goat's head at the boundary of the village. The ritual of carrying a basket with the goat's head to the neighboring village was repeated until it was believed that cholera disappeared (Campbell 1885, p. 143).

A large proportion of Hindus from Bombay city believed that the maleficence of goddess Jurree Murree caused cholera. Individuals who incurred her displeasure were afflicted with the disease. Goddess Jurree Murree was seldom worshipped in Bombay during the early nineteenth century. But during cholera outbreaks, makeshift shrines dedicated to the goddess would be built only to go into disuse once the epidemic of cholera abated (Bombay: Letter from Mr. Hume 1843, p. 27-28). During outbreaks, large numbers of goats and fowls would be offered in sacrifice at night to propitiate Jurree Murree. The blood of slaughtered animals would be mixed with rice and scattered on the city streets whilst members of the lower castes would consume the meat of the sacrificed animals. During a cholera epidemic, several individuals claimed to be possessed by goddess Jurree Murree and would smear sacred ashes on the bodies of cholera patients. Most of the rituals enumerated in the preceding paragraphs were undertaken by individuals belonging to the lower castes. On the contrary, brahmins who occupied the apex of the caste system would visit larger shrines of Bombay, present expensive offerings to the deity and would chant mantras to secure cessation of the epidemic (Bombay: Letter from Mr. Hume 1843, p. 27-28).

In the everyday rituals associated with the goddess of cholera throughout Bombay presidency, we come across a mentality that treats calamities as episodes in the lives of communities (Chakrabarty 2012, p. 44). The sense of community that was reborn during the cholera outbreak was geographically limited. Nevertheless, such sociality was limited to the village boundaries or one's caste during the early nineteenth century.

R.H. Kennedy, Bombay presidency medical surgeon and missionary regarded the cholera deity as a "demon of pestilence" and ascribed faith in it to the native theory of fatalism (Kennedy 1827, p. v). He recounted an incident in the cantonment of Seroor where a scantily-clad woman intoxicated with drugs declared herself to be an avatar of the fiend of cholera entered the market street. She was followed by a long procession of empty carts, supposedly intended to convey the corpses of those who did not acknowledge her divinity. Kennedy records that the woman was apprehended and her mob of followers dispersed (Kennedy 1827, pp. x-xi). In the second case, an unfortunate man residing in the town of Bassein was accused by villagers of being possessed by the cholera demon and inhumanly massacred (Kennedy 1827, pp. xii-xiii).

Cholera sharpened intracommunal discord particularly among the local Catholic inhabitants of Salsett (Salsette) and Bombay islands. In the third incident, cholera visited Salsett and Bombay respectively between 1818 and 1819. At the time, a number of Catholic inhabitants of both islands—originally Hindus but baptized by the Portuguese—in imitation of their Hindu neighbors worshipped "devils" to avert calamity (Hall 1836, pp. 180-96). The Catholic priests in turn, imposed stiff penalties and required people to perform penances but the latter refused. Under the direction of local village leaders, a Catholic village in Salsett with a population of approximately 4000 individuals abandoned Christianity (Hall 1836, pp. 180-196).

In the fourth episode, Christian Koli fishermen from the hamlet of Chendnee in North Concan took ill during the 1818 cholera outbreak. They appealed to the *sircar* (government) for help but when state and missionary medicines were ineffectual, they turned to the Hindu ceremony of *khel* with trappings of Christianity (Arnold 1993, pp. 174-75). Villagers formed circles around a number of frantic women who were groaning due to the disease's supernatural influence, and sprinkled water and colored earth on these women. Once the women entered trance and became mediums for spirit visitors, they pointed to certain individuals in the community who were accused of carrying the cholera epidemic and were punished by the villagers. Several cholera-stricken Kolis were placed on litters near specially-erected shrines and were cured without recourse to treatment. In the fifth incident, cholera reappeared in Salsett in 1821 and in a few

days 120 individuals succumbed to the disease (Hall 1836, p. 182). The sick and the dying were brought to the village shrine and were beaten with rods in the hope that the cholera demon would be extirpated from their bodies while men and women were seen dancing and falling into a trance, pretending to receive God and promising safety for all those who implicitly trusted them (Hall 1836, p. 183).

British missionaries cited instances mentioned in the preceding paragraphs to demonstrate the superstitious ways of the Indians. As David Arnold (1993) contends, "the representation of the epidemic in terms of an awesome or avenging deity was a not uncommon one, and for many villagers the collective crisis created by cholera might have been made intelligible or capable of resolution only through the mediation of "goddesses" or spirit mediums" (Arnold 1993, p. 175). The state was apprehensive that the religious frenzy described by Kennedy and other missionaries would spread panic.

The colonial administration largely followed a policy of non-interference in the customs and superstitions of the Indians as long as they did not threaten public tranquillity. However, responses to cholera were sometimes violent and could not be ignored. Authorities equated witch hunts in territories newly annexed by the British East India Company with civil disturbance or with protests against the British East India Company's newly-introduced land revenue settlement. In certain districts of North Concan (Konkan) for example, individuals accused of witchcraft were killed as a result of a cholera epidemic (Cassels 2010). The Home authorities were particularly exercised over the Bombay government's eagerness to introduce British East India Company's regulations in territories recently ceded to the Company by the Marathas. Five alleged witches were murdered by 82 villagers, all of whom were convicted by the Circuit Court in Surat in January 1819. The Circuit Judge recommended that all but one convicted individual— a village headman who had acted under the influence of alcohol— be granted clemency (Cassels 2010). The Bombay administration then issued a proclamation which stated that the practice of putting witches to death on account of sorcery was repugnant to the enlightened principles of British Laws (Cassels 2010). The killing and beating of "witches" exemplified what Durkheim refers to as "the common conscience"—the attempt to purge elements regarded as threats to social order (Harrison 2020, pp. 502-553; Durkheim 1995).

The gradual inroads of cholera on the island of Bombay by mid-August 1818 enabled the Medical Board to undertake coordinated measures against the epidemic. The Bombay Presidency authorities were opposed to taking any drastic measures that would restrict the free movement of people (Bombay Public Consultations Extract 1818, July 29). The Political Department of Bombay presidency empowered the Medical Department to introduce regulations. In the event of an outbreak of the disease on the islands of Bombay or Salsett, police magistrates would be empowered to appoint medical officers, responsible for conveying information with respect to cholera outbreaks to the public.

The Bombay Medical Board directed John Taylor—a Scottish missionary and a government surgeon—to investigate the manner in which cholera originated in Bombay. Upon interrogating a Brahman physician, he gathered that an inhabitant residing in Gunesa Wara Street in the native quarter of Bombay city had contracted cholera immediately upon his return from Poona on September 14, 1818 and died (Medical reports relative to the Cholera Morbus, no. 38 1819, pp.174-197). The following day, his wife and his neighbor's wife contracted the disease and died. Immediately afterwards, two neighbors succumbed to the disease. Until September 20, 1818 the disease continued to spread in Gunesa Wara and nearly subsided. Seven cases of cholera occurred in different parts of the native town on September 16. The next day, a man suffering from cholera and residing in a populous quarter of Bombay city near the jail was brought to Taylor for treatment but succumbed to the disease. A considerable number of people residing below the jail were attacked by cholera in rapid succession. After peaking around the fourth week of September, cholera cases decreased until November 1818 (Medical reports relative to the Cholera Morbus, no. 38 1819, p. 179).

Taylor contended that although the name Cholera Morbus was associated with vomiting and purging, in many cases there was neither vomiting nor purging; in others there was vomiting but no purging. Mild cholera cases could be checked by administering calomel and laudanum (Medical reports relative to the Cholera Morbus, no. 38 1819, p.180). In the first case, a twelve-year-old Kamati (working-class) girl submitted to Taylor's treatment. Her extremities were cold, her pulse was imperceptible and her eyes sunk in their orbits (Medical reports relative to the Cholera Morbus, no. 38 1819, p.183). Despite being treated with calomel, laudanum, stimulant draught and a warm bath, the girl expired. In the second case, a *faqir*

(religious mendicant)—who attended a sacrificial ritual to avert the attacks of Jurree Murree—suffered from abdominal seizures, followed by mild vomiting and purging (Medical reports relative to the Cholera Morbus, no. 38 1819, p.184). His eyes were yellow and sunken, the pulse could not be felt and he was covered with cold perspiration. The *faqir* was unresponsive to treatment and died. In the third case, a woman who lived close to the Bendy Bazar area of the native town went out in the morning to purchase some articles, fell senseless and was carried to her home. Taylor noted that the woman had a strong pulse but was affected to a considerable degree by trismus. After bloodletting and treatment with calomel, laudanum and a dose of castor oil, the woman recovered (Medical reports relative to the Cholera Morbus, no. 38 1819, p.185).

The different symptoms of cholera noted in individuals were variants of the same disease produced by the same cause operating on peculiar constitutions and persons with diversified situations in life. In the three cases noted by Taylor, patients had labored even when the first symptoms of the disease became apparent and sought treatment only after returning from work.

Varying degrees of severity marked localized cholera outbreaks across the Bombay presidency with one symptom sometimes overshadowing the other. Neither the strong monsoon winds nor the island geography of Bombay appeared to have any influence on the trajectory of the 1818 epidemic. While the onset of cholera cases began on the island of Bombay by mid-August 1818, the epidemic reached a climax in September of that year. At the time, 300 or 400 cases were registered daily. Cholera subsequently diminished as fewer cases were recorded (Medical reports relative to the Cholera Morbus, no. 39 1819, pp. 198-214).

Cholera cases apparently began to increase on the Concan (Konkan) coast in March 1819 and affected the west coast of Salsett (Letter from Secretary to Medical Board, 1819, April 28). Between August 15, 1818 and February 28, 1819, the Bombay Medical Board detected 14,651 cholera cases on the island of Bombay for which medication was administered whilst 938 fatalities were reported (Correspondence between Ogilvy and Newnham, 1819, September 19). Unlike the August 1818 cholera outbreak in Bombay, proportion of deaths were unusually high by April 1819. Due to heat, native inhabitants would sleep outdoors on the streets, exposing themselves to damp chills at night attributed to the land wind, considered at the time by the Bombay Medical Board as a predisposing factor to cholera (Correspondence between Ogilvy and Newnham, 1819, September 19).

The Bombay administration mobilized native medical practitioners under the supervision of the Medical Board to treat patients within the confines of their homes as locals were hesitant to visit hospitals due to caste-based inhibitions related to purity and pollution (Medical reports relative to the Cholera Morbus, no. 38 1819, p. 187). Raghunath Joshi—an Ayurvedic physician from Bombay, who had confidence in European medicine, and recruited by the Medical Board—helped counter prejudices among natives towards medications administered by the Board (Letter from Secretary, Bombay Medical Board 1818, September 16). Additionally, the Bombay presidency authorities issued instructions to native medical assistants in Marathi, Gujarati and Hindustani on the detection of symptoms and treatment of cholera, particularly the administration of calomel doses, and a mixture composed of laudanum, peppermint and brandy (Medical reports relative to the Cholera Morbus, no. 38 1819, p.188).

Between June and August 1819, the number of cases of cholera reported from the villages of Worly (Worli) and Bandora (Bandra) far exceeded those reported from Bombay Island (Correspondence between Taylor and Ogilvy, 1819 September). At the time, native medical assistants misdiagnosed bowel complaints which afflicted agricultural classes during the seasonal rains as cholera. Those who were directly affected by the 1818-19 epidemic included the poorest classes of Bombay who subsisted on a poor diet, underwent considerable fatigue, and slept on the mud floor of huts with scarcely a cloth underneath them. Cold and moisture predisposed the poor of Bombay to cholera attacks (Medical reports relative to the Cholera Morbus, no. 38 1819, p. 195-96). In the low-lying Kamati village of Bombay Island surrounded by water—chiefly inhabited by the Hamal caste (headloaders by occupation)—cholera cases encountered during the 1818 epidemic were particularly fatal ((Medical reports relative to the Cholera Morbus, no. 38 1819, p. 196).

The 1818-19 epidemic largely affected the native inhabitants of Bombay, Europeans were largely unaffected and there was a general belief that the unhealthy state of atmosphere was congenial to cholera outbreaks. Bombay's influential Parsee (Zoroastrian) community inhabiting the Fort area of Bombay island—whose bodily constitution and habits were closer to the Europeans—were worst affected by the 1818 epidemic (Medical reports rela-

tive to the Cholera Morbus, no. 39 1819, p.199).

The first symptoms of the cholera outbreak (1818) in Bombay were slight. Different degrees of severity marked the onset of the disease at different divisions of Bombay Island with one symptom sometimes overshadowing the others. (Medical reports relative to the Cholera Morbus, no. 39 1819, p.199). Police reports of deaths in the Fort and Blacktown divisions of Bombay Island— attributed to the 1818 cholera epidemic—was estimated at 1205 whilst 793 died without medical assistance. (Bombay Public Consultations Extract 1818, October 14).

CONCLUSION

The first cholera outbreak in Bombay city and presidency conforms to Rosenberg's characterization of epidemics as sampling devices that attract widespread concern, admonition, and reflection. Particular victims were blamed, public policies judged, social relations scrutinized, and religious authority both embraced and questioned (Rosenberg 2020, pp. 287-88). Arnold contends that the cholera epidemics of the nineteenth century highlighted the widening gulf between indigenous and western medicine and the different systems of thought they represented (Arnold 1986, p. 135). Yet, there was a significant distinction between the first cholera epidemic of Bombay (1818-21) and subsequent outbreaks that afflicted the city during the latter half of the nineteenth century when the Hajj and Punderpoor pilgrimages were blamed for the spread of disease, including cholera (Arnold 1991, pp. 1-21)-medically based, morally or religious differences.

The British power in India was nascent during the first quarter of the nineteenth century and the official response towards the first documented cholera epidemic in Bombay was influenced by lack of challenge to the authority of the British East India Company. Furthermore, both in England and in India understandings of cholera were based on humoral balance. Although the epidemic disproportionately affected the city's working class and the influential Parsee community, negotiating public responses to the epidemic involved restoring social order. An underlining feature of the 1818 cholera epidemic was the absence of quarantine. Unlike later epidemics, the poor were not stigmatized at the time (Harrison 2020, p. 549). Two initial responses of the Bombay Medical Board towards the amelioration of the first documented cholera outbreak in Bombay included: the recruitment of native medical assistants and an Ayurvedic practitioner; and, dispelling misconceptions with respect to European medicine. Both responses sought to engender a benevolent view of the colonial government amongst inhabitants of Bombay city and presidency.

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REFERENCES

Ainslie, W. (1832). *Letters on the cholera*. John Wilson.

Alavi, S. (2008). *Islam and healing: loss and recovery of an Indo-Muslim healing tradition, 1600- 1900.* Palgrave MacMillan.

Anderson, W.S. (1819). An account of the cholera morbus epidemic in India, in 1817 and 1818. *Edinburgh Medical and Surgical Journal* 15 (60), 354-72.

Arnold, D. (1986). Cholera and Colonialism in British India. *Past and Present* 96 (113), 118-51.

Arnold, D. (1991). The Indian Ocean as a disease zone, 1500-1950. *South Asia: Journal of South Asian Studies* 14 (2), 1-21.

Arnold, D. (1993). *Colonizing the body: state medicine and epidemic disease in nineteenth century India*. University of California Press.

Bird, J. (1849). Contributions to the pathology and treatment of cholera. *London Journal of Medicine* 1 (4), 313-21.

Bombay Report. (1832). Bombay report on the cholera Morbus. *The Medico-Chirurgical Review and Journal of Practical Medicine* 17 (33), 57-72.

Bombay: Letter from Mr. Hume. (1843). Prevalence of the cholera: Hindu notions of the cause and remedy dated August 4, 1842, *The Missionary Herald: Containing the Proceedings of the American Board of Commissioners for Foreign Relations* 39, pp. 27-28.

Boyd, K. (2020). Explanatory frameworks and managing randomness. *Journal of Medical Ethics* 46 (8), pp. 93-94.

Campbell, J.M. (1885). *Rough Draft: notes on the spirit basis of belief and customs*. Government Printing Press.

Cassels, N. (2010). *Social Legislation of the East India Company: Public Justice Versus Public Instruction*. Sage.

Chakrabarti, P. (2010). Curing cholera: pathogens, places and poverty in South Asia. *International Journal of South Asian Studies,* 3, 153-68.

Chakrabarty, D. (2012). Community, state and the body. In David Hardiman and Projit Bihari Mukharji (Eds.), *Medical marginality in South Asia: situating subaltern therapeutics*, 36-59). Routledge.

Correspondence between Taylor, Assistant Surgeon and George Ogilvy (1819, September). Papers regarding the cholera epidemic: measures taken to control the spread (Doc. IOR/F/4/620/15431). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Dossal, M. (1988). Henry Conybeare and the politics of centralised water supply in mid-nineteenth century Bombay. *Indian Economic and Social History Review* 25 (1), 79-96.

Durkheim, E. (1995). *The elementary forms of religious life*. The Free Press.

Elliot, W. (1893). Misellaneous notes of the late Sir Walter Elliot: on the disease called Cholera Morbus or Cholera Asphyxia. *The Imperial and Asiatic Quarterly Review*.

Extract from Bombay Public Consultations (1819, April 28). [Letter from Secretary to Medical Board] Papers Regarding the Cholera Epidemic: Measures Taken to Control the Spread (Doc. IOR/F/4/620/15431) British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Extract from Public Consultations (1819, January 7). [Public Letter from Bombay]. Papers Regarding the Cholera Epidemic in Bombay Presidency: Measures Taken to Control its Spread (Doc. IOR/F/4/620/15431). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Extract from the Bombay Public Consultations (1818, July 28). Papers Regarding the Cholera Epidemic: Measures Taken to Control the Spread (Doc. IOR/F/4/620/1543). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Extract from the Bombay Public Consultations (1818, October 14). Papers Regarding the Cholera Epidemic: Measures Taken to Control the Spread (Doc. IOR/F/4/620/1543). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Extract, Bombay Public Consultations (1819, September 19). Correspondence between Ogilvy and Newnham, September 19, 1819 (Doc. IOR/F/4/620/15431). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Gemelli, J.F. (1700). *A voyage round the world*. No publisher.

Hall, G. (1836). Correspondence to the Secretary of the American Board of Commissioners. In *Anecdotes of the Bombay Mission for the conversion of the Hindoos: exhibiting an account of the travel and missionary labours of Messrs. Hall, Newell, Judson, Mills, Richards, Rice and Nott in different districts of the East Indies with sketches of the idolatrous customs of the native inhabitants: extracted from the letters and journals of Rev. Gordon Hall*. Frederick and Williamson, pp. 180-96.

Hamlin, C. (2009). *Cholera: the biography*. Oxford University Press.

Harrison, M. (2020). The dreadful scourge: cholera in early nineteenth century India," *Modern Asian Studies* 54 (2), pp. 502-553.

Jackson, A.M.T. &, Enthoven, R.E. (1915). *Folklore notes: Konkan*, *volume II*. British India Press.

Johnson, J. (1818). *The influence of tropical climates on European constitutions to which is added tropical hygiene on the preservation of health in all hot climates*. Motley and Harrison.

Kennedy, R.H. (1827). *Notes on the epidemic cholera*. Baptist Mission Press.

Letter from Secretary, Bombay Medical Board (1818, September 16). Papers regarding the cholera epidemic: measures taken to control the spread, July 1818-November 1819 (Doc. IOR/F/4/620/15431), British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

MacPherson, J. (1866-72). On the early seats of cholera in India and the East. *Transactions of the Epidemiological Society of London* 3, pp.53-82.

MacPherson, J. (1869). *On the early seats of cholera in India and in the East: with reference to the past and the present.* T. Richards.

MacPherson, J. (1872). *Annals of cholera: from the earliest periods to the year 1817*. Ranken and Company.

Medical Board Report No. 42, Folio 2028 (1819, October 14). [Bombay Medical Board Report]. Papers Regarding the Cholera Epidemic in Bombay Presidency: Measures Taken to Control its Spread (Doc. IOR/F/4/620/15431). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Medical Board Report No. 42, Folio 2046 (1819, October 14). [Bombay Medical Board Report].Papers Regarding the Cholera Epidemic in Bombay Presi-

dency: Measures Taken to Control its Spread (Doc. IOR/F/4/620/15431). British Library Digital Collections. https://access.bl.uk/item/viewer/ark:/81055/vdc_100057283538.0x000001#?c=0&m=0&s=0&cv=0&xywh=-3729%2C-338%2C11250%2C6759.

Medical reports relative to the Cholera , no. 35. (1819). Copy of letter from Assistant Surgeon Anderson to Mr. Milne, August 14, 1818. In *Reports of the epidemic cholera which has raged throughout Hindostan and the Peninsula of India since August 1817* (pp. 140-43). Jos. Fra. and Jesus.

Medical reports relative to the Cholera Morbus, no. 32 (1819). Copy of letter from Capt. Sykes to Milne, August 15, 1818. In *Reports of the epidemic cholera which has raged throughout Hindostan and the Peninsula of India since August 1817* (pp. 115-19). Jos. Fra. and Jesus.

Medical reports relative to the Cholera Morbus, no. 36 (1819). Copy of letter from Surgeon Coats to Robert Stuart, Esq. President Medical Board dated 1818[?]. In *Reports of the epidemic cholera which has raged throughout Hindostan and the Peninsula of India since August 1817* (pp.144-55). Jos. Fra. and Jesus.

Medical reports relative to the Cholera Morbus, no. 38 (1819). Copy of letter from Dr Taylor to President of the Bombay Medical Board Robert Stuart dated November 6, 1818. In *Reports of the Epidemic Cholera Which Has Raged Throughout Hindostan and the Peninsula of India from August 1817* (pp. 174-97). Jos. Fra. and Jesus.

Medical reports relative to the Cholera Morbus, no. 39 (1819). Letter from George Ogilvy, Esq. to the President of the Medical Board. *Reports of the epidemic cholera which has raged throughout Hindostan and the Peninsula of India from August 1817* (pp. 198-214). Jos. Fra. and Jesus.

Medical reports relative to the Cholera Morbus, no.6 (1819). Copy of letter from Assistant Surgeon Thomas Whyte to Dr Milne dated July 28, 1818. In *Reports of the epidemic cholera which has raged throughout Hindostan and the Peninsula of India since August 1817* (pp. 11-24). Jos. Fra. and Jesus.

Ovington, J. (1696). *A voyage to Suratt in the year 1689*. J. Tonson.

Preface. (1819). Preface. In *Reports on the epidemic cholera which has raged throughout Hindostan and the peninsula of India since August 1817* (pp. I-XLIII). Jos. Fra. and Jesus.

Rai, S.K. (2023). Colonialism, epidemics and the Indian experience. In Poonam Bala and Russel Viljoen (Eds.), *Epidemic encounters, communities and practices in the colonial world* (pp. 211-34). Lexington Books.

Ramanna, M. (2000). Indian attitudes towards western medicine: Bombay, a case study. *Indian Historical Review* 27 (1), 44-55.

Ranken, J. (1823). Observations on the epidemic cholera morbus of the East Indies. *The Edinburgh Medical and Surgical Journal*, 1821-32.

Rosenberg, C. (1966). Cholera in nineteenth-century Europe: a tool for social and economic analysis. *Comparative Studies in Society and History* 8 (4), 452-63.

Rosenberg, C. (1989). What is an epidemic: AIDS in historical perspective. *Daedalus* 118 (2), 1-17.

Rosenberg, C. (2020). Shaping a pandemic narrative. *Social Research: An International Quarterly* 87 (2), pp. 287-88.

Samanta, A. (2018). *Living with epidemics in colonial Bengal*. Routledge.

Sarkar, S. (2002). The prevention of cholera in nineteenth century Bombay. *Proceedings of the Indian History Congress* 63, pp. 1345-46.

The Lancet. (1831-32). History of the rise, progress, ravages & c. of the blue cholera of India. *The Lancet* (1831), 241-84.