‘An infection of locality’: plague, pythogenesis and the poor in Bombay, c. 1896–1905

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ABSTRACT: In September 1896, a virulent plague epidemic broke out in the colonial port city of Bombay. Central to existing interpretations of the epidemic has been the pervasive assumption that colonial policies aimed at suppressing the disease were principally informed by ‘contagionist’ etiological doctrine. However, this article argues that long-standing ‘localist’ etiological theories continued to exercise a critical influence over colonial policies. It thereby highlights the explicit ‘class’ bias that informed the colonial state’s anti-plague offensive, which was largely directed at the urban poor.

On 14 April 1896, Lieutenant-Colonel George Waters, a British surgeon, delivered a lecture at the Sassoon Mechanics’ Institute in Bombay. During the course of his address, entitled ‘Bombay the Beautiful’, the medical man assured his audience that they had ‘every right to rejoice that our lives have fallen in a place so pleasant – that we live in Bombay the beautiful, bonnie Bombay’.1 Nine months later, Waters returned to the same venue to deliver yet another lecture to ‘a large representative audience’. But on this occasion he was rather less sanguine about the city’s prospects, for his theme was ‘The Plague in Bombay’. ‘The disease with which we are called on to fight in Bombay’, Waters declared, ‘is a scourge of the first magnitude, and eminently deserving of the name of plague. It has already done incalculable damage to Bombay for the blow which this . . . disease has done to the great and progressive trade of this port, will, I fear be felt long after it has disappeared.’2

The discovery of the bubonic plague in Bombay City in September 1896 precipitated a political and social crisis unknown in colonial India since the summer of 1857. The frenzy with which the colonial state responded

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1 G. Waters, Bombay the Beautiful. A Lecture Delivered at the Sassoon Mechanics’ Institute, Bombay, on Tuesday, 14th April 1896 (Bombay, 1896), 18.

2 G. Waters, Plague in Bombay. A Lecture Delivered at the Sassoon Mechanics’ Institute, Bombay, on Monday, 11th January 1897 (Bombay, 1897), 3.
to the plague epidemic has been well documented by historians.\textsuperscript{3} Significantly, a pervasive assumption in the scholarly literature is that colonial plague policies were predicated on the belief that the disease was contagious, in other words, transmitted either directly or indirectly through human agency. Since ‘contagionist’ etiology (the theoretical exposition of the origins and causes of diseases) entailed breaking the ‘chains of transmission’ and ‘interrupting the circulation of carriers by means of cordons, quarantines and sequestration’,\textsuperscript{4} the recent historiography on the Indian epidemic has largely focused on what Arnold has termed the colonial state’s ‘unprecedented assault upon the body of the colonized’.\textsuperscript{5} Historians have predominantly examined the impact of policies such as the compulsory hospitalization of suspected victims, the intrusive house-to-house visitations in the search of cases, the segregation of those who came into contact with the afflicted and the enforcement of elaborate quarantine regulations.

However, the assumption that plague policies were based on unambiguously contagionist principles has impelled scholars to focus on the colonial state’s assault on the bodies of its subjects while downplaying the equally severe offensive against the urban built environment. Furthermore, since the doctrine of contagion necessarily presupposed that the disease would spread in a random manner, studies that emphasize its centrality have been unable to account satisfactorily for the ‘class-specific’ character of colonial plague policies in the urban context.

This article seeks to shift the emphasis in order to explain how and why, from the very outset of the epidemic, colonial plague policies specifically targeted both the neighbourhoods and the bodies of Bombay’s poor. For nearly a decade after the initial outbreak in the city, it is argued, longstanding assumptions that viewed epidemic diseases as a product of locality-specific conditions of filth and squalor exercised a significant influence over the colonial state’s war against plague.\textsuperscript{6} In contrast to


\textsuperscript{4} P. Baldwin, Contagion and the State in Europe, 1830–1930 (Cambridge, 1999), 4.

\textsuperscript{5} D. Arnold, Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth Century India (New Delhi, 1993), 203.

\textsuperscript{6} The precise role of localist perceptions of plague as an environment-specific, pythogenic (generated by, or from, filth) disease in informing colonial plague policy has either been downplayed or misconstrued in the existing historiography. On the one hand, for instance, while Arnold acknowledges that both ‘the human body and the local conditions of human habitation and sanitation were thought in the 1890s to be the primary factors in the spread
contagionist etiology, which focused on the human body as the ‘carrier’ of disease, the ‘localist’ framework emphasized the role of environmental factors as a predisposing cause of the plague.\(^7\) With regard to preventive action, whereas contagionist theory entailed a confinement of the human body in combating disease, the localist perspective emphasized the need to ameliorate its underlying ‘environmental causes’.\(^8\)

This article suggests that localist assumptions informed colonial plague policies in two crucial ways, both of which accentuated their ‘class-specific’ character. First, many contemporary observers were inclined to ascribe the microbial origins of the disease to localized conditions of filth, lack of ventilation and general ‘sanitary disorder’.\(^9\) Consequently, from the beginning, the colonial anti-plague campaign in Bombay rested on the belief that the disease had an identifiable locus in the ‘slums’ of the poor. Second, localist ideas combined with orthodox contagionist doctrine to produce a variant of what might be termed ‘contingent contagionism’, in that conditions of filth were seen to generate plague germs, which were then communicated from person to person.\(^10\) Hence, the frenzied of the disease’, his own focus is restricted to the policies that flowed from the ‘perceived centrality of the human body as plague’s source and vehicle’. Arnold, Colonizing, 202–3. On the other hand, Chandavarkar has suggested that as the disease gradually engulfed the Indian subcontinent, colonial officials came to associate it with poverty and filth. The complacency engendered by this realization is said to have accounted for the change in the nature of colonial plague policy from one of forceful intrusion to benign indifference. Chandavarkar, ‘Plague panic’, 209. This line of reasoning is problematic. The association of the disease with the consequences of poverty did not dawn slowly on colonial officials; rather, it had coexisted alongside ‘contagionist’ explanations from the outset. Moreover, if the identification of the disease with filth and poverty was present from the very beginning and did not preclude the vigour with which plague measures were enforced in the early years of the epidemic, it could scarcely be adduced as the principal reason for the later relaxation in policies. In this context, for an important intervention that highlights the influence of localist ideas during the early years of the plague epidemic, see M.P. Sutphen, ‘Not what, but where: bubonic plague and the reception of germ theories in Hong Kong and Calcutta, 1894–1897’, Journal of the History of Medicine and Allied Sciences, 52, 1 (1997), 81–113. In this context, see also L. Fabian Hirst, The Conquest of Plague: A Study of the Evolution of Epidemiology (Oxford, 1953), 115–20, 292–6.

\(^7\) Of course, it would be a gross over-simplification to posit a ‘manichean’ division either between etiological theories based on localist and contagionist doctrines, or the mode of preventive treatment conventionally associated with each: namely, ‘sanitarianism’ and ‘quarantinism’. Nevertheless, as Peter Baldwin has recently observed, ‘it remains the case that a crucial distinction persists over the longue durée of western thinking about diseases and their causes that should not be effaced by attempts to render nuanced and more subtle otherwise overly stark dichotomies’. In other words, ‘a closely related distinction has been drawn etiologically speaking, between a focus on the environmental background of epidemic disease and its transmissibility among humans; prophylactically, between attempts to ameliorate toxic surroundings and limiting contagious spread’. Baldwin, Contagion, 7–10.

\(^8\) Ibid., 4.

\(^9\) Indeed, the new microbial theories were frequently apprehended through the prism of longstanding localist theories that saw the plague germ as being produced by, and proliferating in, filth. See Sutphen, ‘Not what, but where’, 84, 112.

\(^10\) On the notion of ‘contingent contagionism’ in early nineteenth-century Britain, see M. Pelling, Cholera, Fever and English Medicine (Oxford, 1978), 18–19. For an account of
‘quarantinist’ policies in the initial phase of the anti-plague offensive did not target the city’s Indian population in a socially indiscriminate fashion. Rather they were driven by an anxiety that Bombay’s poor, by virtue of being innately susceptible to the plague contagion nurtured in their insanitary ‘slums’, would infect the city’s elites. The article thus underscores the explicit ‘class’ bias that informed the colonial state’s anti-plague offensive, which predominantly took the form of an assault both on the neighbourhoods as well as the bodies of the urban poor.

Filtrh, poverty and the plague epidemic

Bombay’s rise as a major manufacturing city from the 1850s produced consequences similar to those experienced elsewhere in the modern industrial world during the nineteenth century. The proliferation of large textile factories and small-scale industrial units, rapid demographic growth and concomitant urban expansion was accompanied by the widespread prevalence of a variety of diseases that ravaged the city’s poor. While some epidemic diseases like cholera, measles, smallpox and tuberculosis had become more or less endemic in the city during the latter half of the nineteenth century, malaria and a host of unspecified ‘fevers’ also claimed a large number of victims each year.11

During the late nineteenth century, colonial medical and sanitary officials interpreted the causes of the principal epidemic diseases primarily in terms of a localist framework that accorded causal primacy to polluted urban spaces and filth. In the annual reports of Bombay’s health officer during the last quarter of the nineteenth century, the diseases that occurred in the city were consistently attributed to the effects of a localized miasma produced by contaminated air, water or soil. This environmental pollution, which was linked to poor sanitary conditions both within dwellings and in entire neighbourhoods, was held to be the principal ‘predisposing’ cause of disease.

Arguably, localist doctrines remained entrenched within the discourse of medical and sanitary officials in colonial Bombay during the late nineteenth century precisely because they appeared to provide a plausible explanation for the higher mortality rates in the city’s ‘slums’ as well as for the greater susceptibility of the poor to epidemic diseases.12 Indeed, during the last quarter of the nineteenth century, there emerged in colonial Bombay what one medical geographer has recently termed a ‘metonymy


12 As Roy Porter has observed, ‘Miasmatism seemed to explain why it was slum districts and the poor who were most severely stricken in times of epidemic.’ R. Porter (ed.), *Cambridge Illustrated History of Medicine* (Cambridge, 1996), 103.
between place and disease’. The annual reports compiled by the health officer invariably highlighted the fact that the sections of city that posted the highest death rates were those inhabited predominantly by the poor and were characterized by overcrowded and ill-ventilated dwellings and large collections of filth.

Given the centrality accorded to ‘predisposing’ environmental factors in accounting for the origins and incidence of epidemic disease, the health officer repeatedly emphasized the importance of urgent improvements in the city’s civic infrastructure. However, sanitary reforms occupied a relatively low place in the agenda of the colonial state during the late nineteenth century. Indeed, as Bombay began to expand rapidly under the impetus of industrial development, the city’s health officer repeatedly complained about the poor state of its sanitary infrastructure. Such complaints were a tacit acknowledgment of the culpability of colonial policies in perpetuating the abysmal sanitary conditions within the city. But colonial officials frequently blamed the habits of the urban poor for the high mortality rates in the city’s poorer quarters. In particular, their ignorance of the elementary principles of hygiene was seen to foster an environment that was conducive to disease. The poor, the health officer was wont to remark, ‘are naturally the filthiest in their habits and customs, and are the great filth-producers in this city’. And it was often noted that, given their weakly constitution, there was every likelihood that once in a while ‘some disease will arise and sweep off the most effete of the population’.

The plague outbreak in Bombay thus confronted colonial authorities with their worst nightmare and crystallized anxieties about their hold on empire. Yet, as scholars of the plague epidemic in colonial India have pointed out, even as they began to combat the plague colonial officials knew relatively little about the etiology of the disease. Indeed, despite the knowledge that a microbe had been identified in conjunction with the

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14 Thus, the health officer made it a point to emphasize in his annual reports that sections inhabited predominantly by the city’s labouring classes, such as Kamathipura, Khara Talao, Kumharwada, Mandvi, Nagpada, and Umakharadi, which regularly posted the highest mortality rates for the city, were also ‘districts of ill-ventilation, of density and crowding, and of imperfect and faulty drainage’. Twentieth Annual Report of the Health Officer, *Annual Administration Report of the Municipal Commissioner of Bombay* (hereafter *ARMCB*) for the year, 1886–87 (Bombay, 1887), 253–4.

15 See, for instance, the Report of the Health Officer in *ARMCB*, 1875, 126–7.

16 On the great emphasis placed on the role of predisposing factors within the localist framework, see Baldwin, *Contagion*, 4–5.


disease, medical authorities remained unsure whether the bacterium was a sole causal agent or just one of the consequences of the disease. Nor, indeed, was the specific mode of transmission of the microbe understood very well. Consequently, the old controversy over whether plague was a contagion or the product of a localized miasma continued to persist in spite of the medical discovery of the pathogenic agent at work. Indeed, even though they accepted the new germ theory in some measure, many colonial medical and sanitary officials in Bombay found it hard to discard well-entrenched localist ideas in making sense of the plague. Thus, a memorandum presented to the Government of Bombay by local medical practitioners in January 1897 claimed that ‘the bubonic plague now prevailing in the city is under certain conditions only slightly contagious or infectious’, and that ‘the facts observed in connection with individual cases and those associated with the general progress of the disease, warrant us in concluding that its incidence is greatly due to local conditions’.

There were many reasons for the persistence of localist ideas in contemporary official accounts of the plague in Bombay. First, the suspicion with which many medical and sanitary officials viewed the new bacteriological theories led them to rely on long-standing localist explanations in making sense of the epidemic. Indeed, some medical observers even criticized the predominant focus on the plague bacillus at the expense of the supposedly more crucial sanitary factors that enabled it to thrive.

Second, localist theories continued to remain pervasive because they were able to supply a plausible account of the etiology of the plague in a context of considerable uncertainty. In this context, it made sense for some observers to filter the new theory of microbial agency through the long-standing localist etiological framework that viewed epidemic diseases as a product of filth and environmental pollution. Localist ideas appeared to supply the missing link in the etiology of the plague by suggesting that the germs that caused the disease were either a product or a constituent element of localized sanitary disorder. Thus, a number of contemporary observers simply reconciled the idea of microbial agency with the notion of predisposing causes that were the outcome of a generalized sanitary disorder. As one official history of the plague epidemic declared, ‘Filth,
overcrowding, bad ventilation, and bad drainage are the fostering causes of plague.’\textsuperscript{30}

Furthermore, the localist perspective gained credence because it appeared to explain certain clearly observable features of the plague epidemic in Bombay. For instance, the epidemic was first discovered in Mandvi, a district that had been consistently identified in previous years as being amongst the city’s more insanitary areas.\textsuperscript{31} Some officials were quick to point out that in this ‘densely populated quarter’ of the city ‘conditions were very favourable for its development’.\textsuperscript{32} Localist theories also helped to make sense of the distinctive social geography of the epidemic in the early years. As the disease spread out from Mandvi towards the end of 1896, it quickly became apparent that the incidence of mortality was more severe in the poorer quarters of the city. Naturally, localist theories that highlighted the determining role of environmental pollution and sanitary conditions offered a ready-made and commonsensical explanation for why the poorer quarters of the city suffered more on account of the ravages of plague.

Localist theories continued to influence the thinking of many colonial medical and sanitary officials even at the turn of the twentieth century.\textsuperscript{33} A number of colonial sanitary officials as well as medical practitioners who tendered evidence to the Indian Plague Commission of 1898–99 adhered to localist explanations even though they acknowledged the role of a microbe in the causation of plague.\textsuperscript{34} Indeed, by 1902 Bombay’s health officer was convinced that plague had become ‘endemic’ in the city in that, ‘it has become a disease of locality and does not occur in epidemics by being introduced from without and spreading only by personal contact or by means of infected material into uninfected localities’.\textsuperscript{35}


\textsuperscript{32} Annual Report of the Sanitary Commissioner with the Government of India, 1896, with Appendices and Returns of Sickness and Mortality among European Troops, Native Troops, and Prisoners in India, for the Year (Calcutta, 1898), 150.

\textsuperscript{33} Thus, according to Bombay’s Municipal Commissioner, ‘The history of a plague epidemic naturally tends to become a history of insanitary areas – the out-break of plague in them, and the attempts made to free them from infection.’ Report of the Municipal Commissioner on Plague in Bombay (henceforth MCRP) for the Year Ending 31st May 1899, 2 vols. (Bombay, 1900), vol. I, 25. See also Hirst, \textit{Conquest}, 292–6.

\textsuperscript{34} See, for instance, Minutes of Evidence taken by the Indian Plague Commission with Appendices (hereafter \textit{Evidence}), \textit{Indian Plague Commission} (hereafter IPC), 1898–99, 5 vols. (London, 1900), vol. III, 17, 30, 44, 53, 63, 82, 120, 291. The commission, for its part, was not convinced by their arguments and observed that it had been ‘unable to find anything in the nature of statistical evidence or in the nature of inference from scientific observations to establish the proposition that any of the sanitary defects referred to, or any combination of them, exercise any marked favouring influence on the spread of plague’. IPC, \textit{Report}, vol. V, 169. However, in a long dissenting note T.E. Fraser, the president, argued that while plague was no doubt an infectious disease ‘produced by a specific micro-organism’, its incidence was greatly influenced by ‘the polluted atmosphere and other conditions existing in the interior of inadequately ventilated and lighted dwellings’.

\textsuperscript{35} Report of Health Officer, \textit{ARMCB}, 1901–02, 176. Such was the influence of these views that when a Plague Research Commission came to Bombay in 1905, one of their first tasks was ‘to inquire closely into the sanitary circumstances of Bombay and their relation to the
Localist doctrine and colonial plague policies

Localist theories had a crucial bearing on the prosecution of colonial plague policies in Bombay from the very outset of the epidemic. Since every source of filth was seen to be a potential breeding ground of the invisible plague microbe, a whole range of sanitary measures were undertaken in order to eradicate it. In his exhaustive account of the first year of the epidemic, the health officer wrote, ‘We treated houses practically as if they were on fire, discharging into them, from steam-engines and flushing pumps, quantities of water charged with disinfectants.’ Lime washing of buildings was actively carried out and an ‘immense number of notices’ to this effect were issued by the Health Department. Close attention was also paid to tenements that were deemed to be ill ventilated, since it was believed that lack of sunlight and exposure to fresh air bred plague germs. Accordingly, ‘All obstructions to the entrance of light were broken down as far as practicable and tiles were taken off many houses so as to let in light and air.’

At the same time, the perception that the general insanitary conditions in many of the city’s poorer localities were the breeding ground of the plague microbe, also led to the initiation of other measures. Thus, acting on the assumption that moisture encouraged the disease, the health officer ‘recommended that the water-supply of all houses where the water produced dampness should be cut off’. Similarly, the belief that ‘bamboos and other materials in the structure of huts or buildings might give shelter to the disease’ also prompted officials to raze them to the ground and set them on fire. The total number of huts of the poorer classes that were destroyed in this fashion ‘aggregated several hundreds’.

Regular house inspections were also instituted in order to determine the sanitary condition of dwellings. Indeed, to an extent even the incidence of that disease in order to resolve the ‘division of medical opinion on the subject’. Hirst, Conquest, 293. Following a sanitary survey of the tenements in Bombay, however, the commission could neither observe any relation ‘between the incidence of plague in these houses and their ventilation’, nor a connection between poorly lit dwellings and the incidence of plague. Moreover, it noted, ‘although the incidence of plague was highest in the most crowded tenements, it was apparently unaffected . . . by the density of population in the different sections of the City’. The commission thus concluded that ‘the insanitary conditions which exist in Bombay have no influence which acts directly on the spread of epidemic plague’. The Etiology and Epidemiology of Plague: A Summary of the Work of the Plague Commission (Calcutta, 1908), 70–1.

37 Local authorities in Bombay were not sure whether this technique really worked and acknowledged that ‘it had no direct influence’ in preventing the spread of plague. However, they persisted with it in the hope that ‘any measure which has a favourable influence on the health of individuals or on the conditions under which they live must increase their chances of life and powers of resistance to disease’. Ibid., 95.
38 Ibid., 173.
39 Ibid., 100–2.
40 Snow, Report, 15.
house-to-house searches for plague cases were an exercise in identifying dwellings that needed sanitary overhauling. According to one official report, ‘not only were plague cases discovered by means of house-to-house visitation, and the infection of the disease controlled and prevented from spreading, but the dark, evil smelling, ill-ventilated, ill-drained, overcrowded lanes and alleys of Bombay were explored and thoroughly cleansed’.41 In many of the city’s poorer sections their inspections convinced plague officials that general sanitary improvement could only be effected ‘after demolishing groups of buildings, and that it was scarcely practicable to effect much improvement in many of the darkest and dampest buildings without demolishing portions of them’.42

Until February 1897 the demolition of buildings was carried out by the Health Department, after which the task was entrusted to a specially appointed official. New regulations were also introduced in order to carry out the various sanitary measures necessary to tackle the epidemic. Thus, on 10 February 1897, the Municipal Commissioner used the powers conferred by the Epidemic Diseases Act to issue a notification that gave the local authorities increased powers and greater control over buildings than they had hitherto enjoyed under the ordinary law.43 These regulations legalized not only the entry and disinfection of buildings and the prevention of overcrowding, but also empowered municipal authorities to declare as ‘unfit for human habitation’ any building that they deemed insanitary, compel landlords to reduce overcrowding in their tenements by turning out lodgers and tenants, peremptorily evict the residents from any building that were to be disinfected, cut off water connections inside buildings and to demolish any tenements that were perceived to be beyond sanitary redemption.44

The direct causal connection established between sanitary conditions and the incidence of plague from the beginning of the epidemic sustained the conviction amongst colonial officials that it was a disease of locality.45 Since there was little recognition as yet that it was the presence of rat fleas that determined the incidence of the disease in a locality, it was the sanitary conditions therein that were seen to generate infection. In turn, this suggested that the only way of combating the high mortality rate and eventually suppressing the disease was to conduct wholesale evacuations

42 Ibid., 186–7.
43 Snow, Report, 15.
44 M.E. Couchman, Account of Plague Administration in the Bombay Presidency, from September 1896 till May 1897 (Bombay, 1897), 68–70.
45 A succinct encapsulation of this view is to be discerned in the following statement in the official history of the plague epidemic in the Bombay Presidency: ‘As far as is at present known, and as far as present evidence permits of a theory, the infection of plague appears to be an infection of locality. That is to say, that a place becomes infected, and a person stopping in such a place is in danger of getting plague’ (italics in original). J.K. Condon, The Bombay Plague, Being a History of the Progress of Plague in the Bombay Presidency from September 1896 to June 1899 (Bombay, 1899), 11.
of the healthy from localities in which plague cases had occurred in order to subject these areas to thorough cleansing and disinfecting operations.46

From the outset, however, the issue of evacuation provoked strong differences of opinion between the Government of Bombay and the Government of India. Towards the end of December 1896, as the death rate continued to rise dramatically, the Government of India directed the head of the medical service, Surgeon-Major-General Cleghorn, to visit Bombay in order to assess the situation. On completing his investigation, Cleghorn presented the Government of India with a note along with a memorandum signed by a number of the local medical practitioners. The memorandum noted that the systematic cleansing and disinfecting of the affected parts of the city had failed to arrest the progress of the disease and emphasized ‘that the only practical method of dealing with the outbreak and of arresting the progress of the disease was the removal of the inmates from houses in which cases of plague occurred, and the subsequent complete cleansing, disinfecting and sanitary overhauling of the premises’. It also suggested that ‘suitable huts should be provided, free of rent, for the accommodation of different classes’.47

The sanitary commissioner backed the proposals in the memorandum. The medical practitioners’ suggestions had merit, Cleghorn believed, since the local health department was ‘frustrated by the difficulty they found in carrying out their operations in inhabited houses’. Wholesale evacuation of plague-affected localities, it was argued, would get around this problem. Cleghorn provided vivid descriptions of living conditions in the Bombay chawls to buttress his case that an unhindered attack on insanitary localities was the only effective way of suppressing the plague.

Convinced by these suggestions, the Government of India repeatedly pressed the Government of Bombay to put them into practice. Since the ‘vigorous’ action taken by local authorities to clean and disinfect the infected parts of the city had failed to arrest the progress of the epidemic, the Government of India considered it necessary ‘that the measures advocated in the memorandum should be adopted, and that temporary accommodation suitable to the families to be removed should be at once prepared’.48

Local authorities in Bombay agreed in principle with the basic premises on which the sanitary commissioner’s recommendations were based.49 The evacuation of infected houses and localities had even been carried out in Bombay on a limited scale.50 The problem of wholesale evacuation

46 Ibid., 182.
48 Ibid., 140.
49 See, for instance, Report of the Executive Health Officer in Snow, Report, 177.
50 ‘The importance of evacuating infected houses and localities was realized at an early date’, the Municipal Commissioner P.C.H. Snow had noted, ‘and, when the disease appeared with concentrated virulence in a particular house, the whole of the residents were removed.’ In December 1896, the Municipal Commissioner had also agreed to a
of infected localities on the large scale proposed by the Government of India, as far as the provincial government was concerned, was essentially a practical one. To give full effect to the sanitary commissioner’s recommendations, they noted, ‘at the lowest computation 30,000 persons belonging to different races, castes and creeds would need to be provided with temporary dwellings’. ‘There was no site within the limits of Bombay municipality’, they pointed out, ‘which would accommodate a tenth of this number.’ Moreover, the people were averse to being moved out and ‘their dread of the disease itself appears to be hardly so powerful as their horror of being removed from their houses’.51

However, while the practical difficulties involved prevented the policy of wholesale evacuation of localities from being pursued energetically in Bombay, a new organization was nonetheless established in January 1898

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51 Further Papers relating to the Outbreak of Plague in India; With Statement Showing the Quarantine and Other Restrictions recently Placed upon Indian Trade up to May 1897. Parliamentary Papers, 1897, LXIII, C. 8511 (HMSO, 1897).
to deal ‘solely with the removal of tenants from . . . infected houses under the orders of the Plague Committee’. The aim, it was stated, ‘was to pass through the camps the greatest possible number of the poorer classes who live in insanitary houses’. As soon as a tenement was vacated, ‘it was at once surveyed with the object of improving its sanitary condition, so that when the poor inhabitants had finished their time in the Health Camp, they might return to a thoroughly disinfected, cleansed, well-ventilated and healthy dwelling’.

The Municipal Commissioner reported subsequently, ‘The evacuation of thoroughly infected houses, was carried on systematically throughout the city.’ And partial evacuation continued to remain an integral part of colonial plague policy even after other aspects had been jettisoned. ‘Speaking generally’, the Municipal Commissioner observed, ‘experience indicates that the danger is greater from being in an infected spot than from contact with an infected person.’ The policy of evacuation of infected localities and houses was thus ‘based on the almost universal experience that the principal danger in a plague epidemic is to be found in the infected locality – that the greatest safety lies in flight’. Indeed, the seeming effectiveness of partial evacuation measures spawned a yearning for a more comprehensive wholesale evacuation scheme of the kind favoured earlier by Cleghorn. Thus, the health officer remarked wistfully, ‘If we could remove 300,000 people from infected houses in Bombay for six months, isolate cases as they occur, keep the vacated houses empty, thoroughly disinfect them, demolish the insanitary quarters, prevent immigration from infected areas, Plague would be under control and soon disappear.’

A ‘contingent contagionism’

Localist assumptions also blended with contagionist doctrine to produce a variant of what might be termed ‘contingent contagionism’, in that it was believed that the plague germ primarily infected those residing in poor sanitary conditions. If plague was a disease generated by filth and

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52 Report of the Bombay Plague Committee for the Period Extending from the 1st July 1897 to the 30th April 1898, under the Chairmanship of Sir James MacNabb Campbell, K.C.I.E (Bombay, 1898), 68.
53 Ibid., 85.
54 Ibid., 70.
56 Ibid., 141.
57 Ibid., 142.
58 ARMCB, 1901–02, 177.
59 The essence of the ‘contingent-contagionist’ perspective is perhaps best encapsulated in the directives issued in January 1898 by the Government of Bombay to all officials connected with the plague administration in the presidency. The memorandum of instructions declared that ‘Plague is a disease which is essentially associated with insanitary conditions in human habitations, the chief of which are accumulation of filth, overcrowding and the
squalor, many officials argued, it followed that Bombay’s poor who resided in ill-ventilated, overcrowded tenements would be more susceptible to its ravages. This, in turn, buttressed the belief that it was the poor, rather than the ‘respectable’ classes, who were the ‘natural’ bearers of contagion. As T.S. Weir told the Indian Plague Commission, ‘Before an epidemic comes, you can map out its course if you have two factors, the buildings and the classes of the population.’60 This view was supported by Dr Thomas Blaney who asserted that in districts ‘which contain the poorest population and the worst houses there we see the plague has the greatest intensity’.61

Such assertions gained increasing credence not only because of the long-standing association of poverty and disease, but also because it became increasingly evident that the plague epidemic had barely touched the city’s elites. As early as January 1897, some observers were quick to note that ‘Europeans themselves have so far escaped with an exemption which at first sight seems marvellous.’62 This knowledge had become commonplace by the time the Indian Plague Commission began collecting its evidence. As one observer told the commission, ‘the incidence of the plague in Bombay has been almost entirely among the lower classes, who are entirely crowded up together a good deal’. On the other hand, although cases had occurred among the well to do, ‘there has been no epidemic among the Europeans or among the higher classes of natives’.63

Nonetheless, during the first phase of the epidemic colonial officials proceeded on the assumption that unless something drastic was done, the disease would not be restricted to the poorer quarters of the city for long. Indeed, many lived in dread at the prospect of the epidemic spreading out from the insanitary eastern part of the city and affecting the European enclaves of the city.64 Since the poor who lived in insanitary conditions were seen as natural repositories of the plague microbe, it became imperative to adopt every measure possible to minimize the threat

absence of light and ventilation.’ ‘It is’, the memorandum added, ‘in the first instance at least, a disease of locality, and is mainly conveyed from place to place by individuals in their person, clothing and personal effects, who have resided in the infected locality.’ Further Papers relating to the Outbreak of Plague in India, Parliamentary Papers, 1898, LXIII, C. 8800 (HMSO, 1898).

62 Waters, Plague in Bombay, 7–8. According to the health officer the mortality rate from plague was the lowest amongst Europeans and Eurasians until the end of 1896. One European and four Eurasians were reported to have died on account of plague during this period. Report of the Executive Health Officer, Snow, Report, 152.
64 Thus, at the height of the first epidemic in February 1897, James Lowson (a member of the Hong Kong Medical Service who had been despatched to assist in the plague operations in Bombay) and W.L. Reade advised the Government of Bombay that prompt measures to suppress the epidemic were in order, since there were growing indications that ‘the almost complete immunity enjoyed by Europeans is decidedly less than formerly, and cases are now occurring in full-blooded Europeans of a rapidly fatal nature’. Government of Bombay (hereafter GOB), General (Plague), 1897, Vol. 52, Compilation no. 102, Maharashtra State Archives (hereafter MSA), Bombay.
they posed to the health of the city’s ruling elites. Of all the classes within the city, Bombay’s poor bore the brunt of the colonial state’s anti-plague offensive. As the city’s health officer acknowledged, ‘From the beginning the greatest attention was paid to the disinfection of houses and to the segregation of the poor.’

The emphasis placed on targeting the bodies of the poor thus suggests that, from the very outset, an explicit ‘class’ bias underpinned the colonial state’s seemingly arbitrary ‘assault on the body’ of the colonized population. Indeed, the belief that plague was a disease that primarily affected those who lived in insanitary dwellings led to a markedly less stringent attitude on the part of plague officials towards Indian elites. The Municipal Commissioner’s original proclamation on 6 October 1896 announcing compulsory segregation in hospital of all plague cases had been ‘received with loud denunciations’ by the respectable classes. A petition signed by the some of the city’s influential Indian residents noted that hospital life was ‘unknown amongst the people’, and that it was perceived by both the patients and their families as ‘certain death’. The respectable classes also expressed resentment that ‘the authorities should make no distinction in this respect between the well-to-do classes who can afford to effect the necessary isolation in their own house and the low unprotected members of society to whom this is not possible’.

Consequently, the Municipal Commissioner issued a second proclamation that stated that ‘no cases where proper segregation and treatment can be carried out on the premises’ would be moved to hospital. From this point on, the Municipal Commissioner noted, segregation of the sick in hospitals was largely resorted to in cases ‘where circumstances made it absolutely impossible to make any suitable arrangement, or where the patients were paupers or friendless’. This was a policy that was supported by contemporary observers like George Waters who declared, By all means … let the sick be isolated, for the great majority of the sufferers from plague are poor persons who cannot have the requisite provision for their recovery in their own squalid homes. For those, however, whose surroundings and means enable them with all that the situation indicates, there seems to me no paramount obligation to be isolated.

Even the initiation in 1897 of a military-style operation directed by a newly established Bombay Plague Committee did not lead to a change in medical policy. The ‘assault on the body’ of the colonized population continued to be made in a manner that was seemingly arbitrary and that targeted the bodies of the poor in manner that highlighted the explicit ‘class’ bias that underpinned the colonial state’s anti-plague offensive.

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66 Ibid., 74.
68 The Gujarati observed that the notification had ‘spread such consternation among Native circles that it is hard for the European officers of Government, with their own ideas about hygiene and the salutary effects of forcible segregation, to adequately realise’. Gujarati, 11 Oct. 1896, RNNP, 42, 1896.
70 Waters, Plague in Bombay, 9–10.
in the basic tenor of the campaign to eradicate the epidemic. The plague committee led by General Gatacre treated the local elites with a great deal of tact over the issue of hospitalization and hence elicited a great deal of praise in the Indian press.\textsuperscript{71} And after the committee was disbanded in 1898, plague officers were ‘permitted to exercise a discretion in the matters of removing patients to hospital, and to allow a patient living in a house, not overcrowded, and with fairly good sanitary conditions, to be treated in his own home’.\textsuperscript{72}

Impressionistic evidence supports the view that it was mainly the poor who were carted off to hospital.\textsuperscript{73} For instance, according to Captain Thomson, a surgeon in the Parel Government Hospital, most of the hospital patients were ‘very poor labouring-class people’ whose ‘horribly filthy condition of the person and clothing of most patients was undesirable’.\textsuperscript{74} Similarly, a majority of the ‘Hindus’ admitted to the Arthur Road Hospital, it was noted, ‘consisted of Deccani and Kokani Mahrattas’, followed by migrants from north India who were ‘mostly employed as syces, dhobies, gowlees or milkmen, coachmen, in the mill industry, and in miscellaneous employments, such as hawkers and sweetmeat sellers’.\textsuperscript{75} In the Grant Road Hospital, too, a ‘major portion’ of the patients were said to be ‘labourers’.\textsuperscript{76} And it was probably the sharp awareness that they were more likely targets than those above in the social hierarchy, rather than an irrational susceptibility to rumours, which perhaps explains why it was the urban poor who mainly took to the streets in protest against colonial plague policies.\textsuperscript{77}

\section*{Sanitarianism and urban renewal}

‘As a consequence of the resistance encountered and the resulting reappraisal of its political priorities and administrative limitations’, Arnold has noted, ‘the Government of India made a series of compromises and concessions in its plague policy in 1898–99. The more coercive and unpopular aspects of plague administration – house and body searches,
compulsory segregation and hospitalization, corpse inspection, and the use of troops – were accordingly abandoned or greatly modified.78 The report of the Indian Plague Commission, published in 1900, generally accepted that plague measures based on coercion such as compulsory segregation of the sick in hospitals, house-to-house searches for plague cases and corpse inspection were counter-productive. On the basis of this report, the Government of India issued a resolution on 16 July 1900, putting a formal end to such policies.79

However, the emphasis on the contagionist underpinnings of plague policies has led historians to overestimate the disjuncture created by the changes initiated after 1898–99. Arguably, there were significant continuities in plague policies well into the first decade of the new century. The basis for this continuity was the enduring hold of localist beliefs that regarded plague as a disease that primarily took root in insanitary neighbourhoods. While the political cost of continuing with compulsory measures based on contagionist doctrine was considered to be unacceptable, it was nonetheless believed that a focus on the locales in which plague was bred would constitute a more effective long-term response to the disease. In a letter to the Bombay Gazette in 1902, the health officer wrote, ‘The condition of climate, the habits of the people, the condition of the soil and surroundings, poverty and filth all tended to foster the disease. Some of these conditions are unalterable, and others can be ameliorated by constant and determined efforts on the part of authorities to improve the sanitary surroundings of the people.’80

Even as the health officer wrote this, a special agency vested with the ambitious task of urban reconstruction had begun to set about reordering the city’s poorer districts on ‘sanitary’ principles. The establishment of the Bombay Improvement Trust in 1898 was the outcome of a firmly entrenched belief that plague was, in the first instance, the direct result of overcrowding in poorly ventilated and filth-ridden dwellings. Consequently, an assault on insanitary dwellings and localities was to be a central feature of its early operations.81 In other ways too, the localist perspective entailed continuities in plague policies. Thus, disinfection, demolition of insanitary dwellings and temporary evacuation of plague-affected dwellings under the provisions of the Epidemic Diseases Act continued to be the mainstay of the colonial state’s anti-plague campaign in Bombay well into the first decade of the twentieth century.

It is, however, in the discourse and practices of sanitary reconstruction espoused by urban authorities that the most significant continuities can be discerned. We have already seen that some contemporaries like T.R.

78 Arnold, Colonizing, 234–5.
79 Government of India (Sanitary), no. 250, resolution of 16 Jul. 1900, National Archives of India, New Delhi.
Fraser believed that ‘darkness and, to a less degree, deficiency of light are conducive to the prolonged existence of the plague bacillus’. To suppress plague, Fraser argued in his note of dissent to the report of the Indian Plague Commission, what was needed was ‘pure air’. This could be achieved by ensuring first, that each room in a dwelling was ‘provided with window for the admission of air and daylight’, and second, by keeping each house and its surroundings ‘reasonably free from all causes of air-pollution’. To do this would be relatively simple, and definitely cheaper than what it cost to combat cholera, since ‘pure air, the chief requirement for the extinction and prevention of plague is everywhere obtainable, and may everywhere be introduced into dwellings by relatively simple and inexpensive measures’.

During the early years of the new century, such views appeared to have exerted a great deal of influence over local authorities in Bombay. Thus, the health officer wrote in 1903, ‘The poor of Bombay now live an artificial life in houses and under conditions to which they are unaccustomed and unsuited, and which render any attempt at sanitation most difficult.’ As a solution, he proposed the evacuation of plague-affected localities in order to enable a wholesale programme of slum destruction in the city’s overcrowded central districts.

The health officer’s scheme was a more ambitious version of the plan outlined by James Cleghorn in 1897, and involved constructing semi-permanent accommodation for 100,000 people while the work of sanitary reconstruction was carried on in the insanitary areas. ‘What I advise’, he wrote, ‘is that all the most insanitary areas be demolished and acquired by the Municipality or Government or Improvement Trust.’ However, the Trust, while ‘willing to undertake a few small Improvement Schemes providing for the people displaced’, argued that its ‘financial obligations’ precluded it from undertaking the ambitious programme sketched out by the health officer. The Trust’s lack of enthusiasm effectively scuppered the health officer’s grand design of sanitary reconstruction.

The perception that poor ventilation and overcrowding were the root cause of the plague epidemic also turned the attention of urban local authorities to the question of overhauling the municipal building bye laws. During the late nineteenth century the city’s health officer had frequently complained about the ineffectiveness of the bye laws. Now, tightening these regulations was seen as a panacea for all the sanitary evils that had dogged the city. A first step towards reforming the building bye-laws had already been taken in April 1901 when W.L. Harvey, the
Municipal Commissioner, set out before the Corporation the loopholes in the municipal regulations and proposed amendments to the Bombay Municipal Act of 1888 with regard to the provision of air-spaces for better ventilation as well as height restrictions on buildings, in order to remedy the existing defects and ‘bring all building operations under sanitary control’.88

As was to be expected, the amendments proposed by the Municipal Commissioner were not well received by a Corporation that was dominated by local landed interests. After a great deal of prevarication, some of Harvey’s proposals were adopted in the Bombay Municipal Act of 1905. However, as one observer later recalled, ‘the legislators of 1905 ignored all Mr. Harvey’s recommendations for the provisions of air spaces round houses’. It was left to the Municipal Corporation to deal with this question through the provision of bye laws, ‘but it was not until 1910 that the discussion on Mr. Harvey’s suggestions ended in the passing of revised bye-laws’. While the bye-laws that were finally adopted effected ‘some improvement in the case of new buildings’, it was at the same time feared that ‘the insanitary condition of the older and more congested building areas must continue to go from bad to worse as long as the control of building operations on old buildings remains as ineffective as it now is under all the Municipal bye-laws’.89

Yet the salient point here is neither the manifest inability of local authorities to impose order on the sanitary chaos that they perceived around them nor the circumvention of the regulations by local landlords. Rather, the noteworthy feature in this context is the degree of continuity that is revealed between the sanitary measures devised to combat the plague in the late 1890s and the discourse and practice of urban planning during the early years of the twentieth century.90

Conclusion

The argument outlined above has two crucial implications for an appraisal of the colonial state’s plague policies. First, existing accounts of the Indian plague epidemic have tended to downplay the influence of localist doctrines on colonial policies. However, this article has shown that the colonial anti-plague campaign in Bombay was informed from the very outset by the belief that the disease had an identifiable locus in the ‘slums’ of the poor and thereby prompted an assault on their neighbourhoods. In part, it was suggested, this was an outcome of the long-standing reflexive association of the poorer quarters of the city with disease and high

89 Ibid., 105.
90 In this context, see also Harrison, *Public Health*, 183–8.
mortality over the quarter of a century preceding the outbreak. However, localist ideas proved to be tenacious even during the first decade of the epidemic since they provided colonial authorities with a plausible theory in a context of considerable uncertainty regarding the etiology of the plague.

Second, scholarly accounts that assumed that colonial plague policies were informed by unambiguously contagionist principles have been unable to provide an adequate explanation for the explicit class bias that informed colonial plague policies, most notably, the disproportionate targeting of the urban poor. This article has argued, however, that the colonial state’s seemingly indiscriminate ‘assault upon the body’ was based upon a doctrine of ‘contingent contagionism’ in that the poor who resided in ill-ventilated, overcrowded tenements in the city’s insanitary localities were perceived as more likely bearers of the plague contagion than the so-called ‘respectable classes’. Consequently, the colonial state’s anti-plague offensive was in large measure directed at the urban poor who were perceived as posing a direct threat to the physical well being of Bombay’s elites.