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When Disease Defines a Place:
Batavia in British Diplomatic and Military Narratives, 1775-1850

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[*Abstract*]

The full impact of COVID-19 has yet to be felt: while it may not define the new decade, it is clear that its immediate significance was to test many of the basic operating assumptions and procedures of global civilization. Even as vaccines are developed and utilized and even as it is possible to see the beginning of the end of COVID-19 as a discrete historical event, it remains unclear as to its ultimate importance. That said, it is evident that the academic exploration of Southeast Asia will also be affected by both the global and regional experiences of the pandemic. "Breakthroughs of Area Studies and ASEAN in the Era of Homo Untact" promises to help reconceptualize the study of the region by highlighting the importance of redefined spatial relationships and new potentially depersonalized modes of communication.

This paper acknowledges these issues by suggesting that the transformations caused by the pandemic should motivate scholars to raise new questions about how to understand humanity—particularly as it is defined by societies, nations and regions. Given that COVID-19 (and the response to it) has altered many of the fundamental rhythms of globalized regions, there is sufficient warrant for re-examining both the

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ways in which disease, health and their related spaces affect the perceptions of Southeast Asia. To achieve "breakthroughs" into the investigation of the region, it makes sense to have another glance at the ways in which the discourses about diseases and health may have helped to inscribe definitions of Southeast Asia—or, at the very least, the nations, societies and peoples who live within it.

In order to at least consider these larger issues, the discussion will concentrate on a formative moment in the conceptualization of Southeast Asia-British engagement with the region in the late 18th and early 19th centuries. To that end three themes will be highlighted: (1) the role that British diplomatic and military narratives played in establishing the information priorities required for the construction of colonial knowledge; (2) the importance not only of "colonial knowledge" but information making in its own right; (3) in anticipation of the use of big data, the manner in which manufactured information (related to space and disease) could function in shaping early British perceptions of Southeast Asia—particularly in Batavia and Java.

This discussion will suggest that rather than see social distancing or increased communication as the greatest outcome of COVID-19, instead it will be the use of data—that is, big, aggregated biometric data which have not only shaped responses to the pandemic, but remain likely to produce the reconceptualization of both information and knowledge about the region in a way that will be at least as great as that which took place to meet the needs of the "New Imperialism." Furthermore, the definition and articulation of Southeast Asia has often reflected political and security considerations. Yet, the experience of COVID-19 could prove that data and security are now fused into a set of interests critical to policy-makers. Given that the pandemic should accelerate many existing trends, it might be foreseen these developments will herald the triumph of *homo indicina*: an epistemic condition whereby the human subject has become a kind of index for its harvestable data. If so, the "breakthroughs" for those who study Southeast Asia will follow in due course.

Keywords: Batavia, Java, Raffles, Charleston, Malaria, Reputational Risk and Data

Ⅰ. Introduction

Over the course of the 18th century, Batavia's reputation went from one of the most impressive colonial cities in Southeast Asia to being feared as a deathtrap. The shift in perceptions about Batavia was rooted in the realities experienced by a disease outbreak in the 1730s which produced a dramatic shift in the city's mortality rate. Most of these people died from "intermittent fever," a short-hand term which frequently described the disease later known as malaria. This paper explores the representations of Batavia in a broad strand of British diplomatic writings and memoirs related to Southeast Asia in order to recover the ways in which the conceptualization of disease reflected both regional experience and colonial world views. In exploring these subjects, the aim is to speak deliberately on past to present in order to lend historical perspective to engage the multifaceted challenges which have defined the global experience of COVID-19. However, the heart of the discussion will investigate the production of information and knowledge to not only understand these practices in their own terms, but also draw upon these episodes in Southeast Asia's past to shed light on the present and possibly the future.

Two key ideas will inform this discussion: (1) In re-examining "colonial knowledge" (partly in light of COVID-19) it is worth considering the genealogy of the concept of "colonial knowledge" to better understand the ways in which it is deployed and, possibly, to see if it is as durable or useful as its frequent usage suggests. (2) This paper is written with the idea that the medical transformation of the 20th century has been decisive in the evolution of just about every feature of global civilization and, yet, it has also been significantly understudied. At its core medical civilization marginalizes the visible manifestations of disease, dying and death. In fact, medical encroachment into virtually every segment of life is possibly the biggest global transformation in the 20th century and has happened with little opposition or controversary, leading this author to think of it as the easy and gradual Revolution. That is, the establishment of medical empires into the everyday life of the 20th century has taken place slowly, but decisively. After all, it might be

possible to imagine future historians looking at the 20th Century as the "Rise of Medical Civilization."

At the same time, it should be acknowledged that academic exploration of Southeast Asia has benefited enormously from scholarship devoted to medical history. This reflects both academic interests, but also the region's history in which concepts such as "tropical medicine" and the prevalence of diseases such as malaria have been endemic challenges. But Southeast Asia has another asset: the integration of many different cultures and their often distinctive medical traditions. In fact, a question for future research might be offered here: does the region's experience with both disease and health enable it to make a unique contribution to the investigation of the ways in which medicine (and health) have shaped global developments in the last two centuries?

British authors who served as diplomats, soldiers, and administrators were quite interested in medical issues. These writers were usually committed to producing information which reflected the strong empiricist bent of the Enlightenment's intellectual culture. In practice, this means they tried to record everything that they saw, even if they little understood them, perhaps also thinking that someone later would make sense of it all. In any event, three narratives are highlighted in this paper, one of which defies normative conventions. *The Island of Java* (1811) was possibly the first substantive publication on the subject of Java in English. John Joseph Stockdale did not write it, but he compiled it from two earlier publications. Stockdale was a London publisher whose reputation would be forever soiled for his publication of Harriette Wilson's (1786-1845) *The Memoirs of Harriette Wilson: Written by Herself* (1825). Since Wilson had been an energetic and active courtesan in her youth, this sordid memoir compromised several key figures in the British court (Bastin 1995: 1). Stockdale had never traveled to Java or Southeast Asia, but he had an eye for marketing books such as *The Island of Java* (1811) and exploited the publicity opportunity which would emerge from Britain's invasion of the island, then known to be imminent. This text contains two interesting narratives, but the reason for its inclusion here is that it also offered detailed accounts of Batavia as a disease environment.

In fact, it supplied statistical analysis to document the extent of mortality in this important colonial port.

The Conquest of Java is another text which makes reference to disease in Batavia (and elsewhere). Unlike *The Island of Java*, this memoir by Major William Thorn provided detailed accounts of the British invasion of Java. While it did not treat the subject of health in quite the same way, it also reflected colonial engagement with the subject.

Lastly, Sir Stamford Raffles (1781-1826), better known as the "founder" of modern Singapore, wrote the first systematic history of Java which appeared in 1817. *The History of Java* (1817) chronicled the way a British administrator engaged the subject of Java and the issues posed by disease in Batavia.

Taken together, these writings enable us to better understand the formation of "colonial knowledge," particularly as it is applied to two parts of Southeast Asia. These authors represented both Batavia and Java, but for our purposes here, it will be clear that they did so in relation to concerns about sickness and health. They did not consciously attempt to construct a unique body of knowledge, but their effort reflected empiricist presuppositions. It may be the case that in the 19th century, colonial administrators "gathered data" to support their governance and better articulate their differences from their subject populations or the "framing of the Southeast Asian Other (both colonized and free) as the constitutive Other to Western identity" (Noor 2020: 17). However, this discussion will show that these authors drew upon data collected in the 18th century, organized to address the public health crisis in Batavia from the 1730s onward. That is, the practice of collection, classifying, and analyzing data were essential practices in the effort to solve a medical mystery and its presence in a region which was not fully understood. While they did not recognize the process by which illness develops, their experiences led them to label certain places, environments, and practices as unhealthy at best. They also described peoples, flora and fauna, religious practices, customs, and many other things that they encountered; yet, these narratives attested to the manner in which disease, and all that came with it,

can help to define a place (city, geographic feature, nation, or region). These authors wrote with the advent of public health on the horizon.

Roughly a century later, Hendrik Freek Tillema, trained as a pharmacist, wrote as an ethnographer and collected information about parts of Java and Borneo, and labored to improve public health in the Dutch East Indies (King 1987:11). Tillema, like many colonial authors, has been understudied or even relegated to the "dustbin of history," but insisted on the importance of medical statistics to reveal the impacts of disease, and therefore, to make possible improvements in healthcare (King 1987: 11). Last, it should be clear that based on this slender selection, both Thorn and Raffles were clearly attempting to keep Java from becoming misrepresented as a place of disease, an honor which Batavia already possessed.

It might be objected that these are not truly indigenous voices or even autonomous ones. However, reconstructing disease history is often challenging, particularly because the sources tend to favor those who come from more substantial backgrounds. As we will see, there is relevant information about indigenous populations because they also suffered from malaria—the disease most relevant to this discussion, even if it was normally referred to as the "intermittent fever." This discussion points to the ambiguities of "colonial knowledge" because even if it is now viewed negatively, it remains relevant, perhaps even foundational for modern medical thought.

A more interesting and related question is whether indigenous voices are those most likely to name or define a place by reference to disease. This is a complicated issue because it almost certainly involves degrees of immunity, but also normalized behaviors. In contrast, it is possible to imagine that the colonial project's capacity to manufacture information, classify, and analyze it all in the service of the state is probably the more likely candidate to devise such characterizations, and an even better one to get it badly wrong.

1.1. Places Defined by Disease

Britain's engagement with the Malay Archipelago in the 18th century was episodic, but increasingly relevant to its larger foreign policy objectives. Our attention will focus on Java, especially Batavia, as explicated by the texts assembled by Stockdale, Thorn's memoir, and Raffles' history. While these works did not focus on disease, they remain very valuable for aiming to communicate as much about their subjects. In short, it would not have been possible for these writers to engage the subject of Java without explaining that the island contained a number of places, most notably Batavia, which were dominated by disease. Not surprisingly, perhaps, by the end of the 18th century the VOC employed roughly 300 surgeons to treat their employees and garrisons. Roughly 200 were mobile: serving on ships (including travel to and from Holland) or being sent to relevant points within the East Indian Archipelago (Elyazar, et al.2011: 20).

At the beginning of the 18th Century, Batavia was still referred to as the "Queen of the Orient" (Blussé 2008: 37). Batavia's growth and transformation reflected a wide compass of history. Leonard Blussé notes that this was due to the "epochal regime changes" that China, Japan, and the Indonesian Archipelago experienced in the early 17th century (2008: x). The location of Batavia, proximate to both the worlds of Chinese and Indian Ocean commerce meant that it "sat as a spider in its web" (Blussé 2008: 5). More broadly, Blussé argued that Batavia was a "visible city," which like Nagasaki and Canton, brought to life the vibrant interactions of East and West, a result of the vast expansion of trade and cultural interactions (Blussé 2008: 5). In addition, these forces also reflected the wider influences of the French and Industrial Revolutions. With respect to Batavia's more immediate environment, the second half of the 18th century witnessed the erosion of Dutch naval dominance amidst the Malay world (Blussé 2008: 7). The Dutch had quite consciously decided to make Batavia the center of Southeast Asian operations. Jan Pieterszoon Coen had selected the site precisely to capitalize on Chinese trading networks (Blussé 2008: 18). Yet, by the end of the 18th Century, Batavia was no longer known as the "Queen of the East," but was probably better known as the "Cemetery of the East"

(Blussé 2008: 43).

This discussion focuses on Batavia because in the 18th century, it had been home to a dramatic epidemic which changed both the city and its ability to serve Dutch colonial interests. In 1733, an unknown disease outbreak suddenly shattered Batavia. Before 1733, the town had about 5,000 to 7,000 Europeans. Around 500 died every year, but in that year the mortality rate spiked, surging upwards to about 2,500. Most were Europeans who came to Batavia for the first time. The disease outbreak became endemic, with an annual mortality rate ranging from 2,000 to 3,000 every year (Van der Brug 1997: 893-894).

These developments had long range implications for Batavia. The disease would later be identified as malaria (though other diseases were present), which had long been in Batavia. However, what had changed was the prevalence of *A. sundaicus mosquitos*, which proved to be the new disease vector (Van der Brug 1997: 896). The higher mortality proved to be a disaster for the VOC. In order to make up for the labor shortage, large numbers of people were recruited, but some 75,000 extra people died not long after arriving in Batavia. By the end of the Fourth Anglo-Dutch War, the VOC fell into debt before it collapsed; it would be replaced by the Dutch East India Company (Van der Brug 1997: 901). Not surprisingly, by the end, if the not the middle of the 18th century, Batavia had the reputation as a profoundly unhealthy place.

It is useful to compare Batavia's experience with Charleston (South Carolina) which in the 18th century had become one of the crown jewels of the British Empire in the Americas. Charleston has an interesting local story to tell, but like Batavia its actual significance reflects a much larger and wider set of historical interests. Even if Charleston is remembered as the place where the American Civil War broke out (when Fort Sumter is bombarded on 12 April 1861), the city's glory days were in the 18th century, when it dominated the export of rice ("Carolina Gold" being one example) and served as a key nodal point for the robust, but still rapidly growing Atlantic economy. More famous, perhaps, Charleston acquired a reputation as being one of the key destinations for slaves

who were being transported from Africa to North America. The slave market in Charleston points to another larger reality: the city was the place where the Transatlantic slave trade met colonial society and later the US South. Consequently, like Batavia, Charleston was a city which had become prosperous because of its role in the commercial interests made possible by slavery. In addition, like Batavia it was from the outset a multi-ethnic environment and one where inhabitants brought very different immunities and epidemiological inheritances.

In his award-winning *Slavery, Disease, and Suffering in the Southern Lowcountry* (Cambridge 2011), Peter McCandless depicted an almost identical situation to the one which had come to define Batavia. Charleston, which has a subtropical climate, was also a rich disease environment: the slave trade resulted in the importation of many diseases of African origin, including yellow fever, *falciparum* malaria, guinea worm, filariasis and lesser-known afflictions (McCandless 2011: 7). Another less virulent form of malaria *vivax* was present as well, but it probably came from Britain the last decades of the 17th century (McCandless 2011: 44). Those who lived in Charleston believed that the deadly fevers originated from the swamp area. Smallpox was both present and a constant threat: for instance, at almost the same time that Batavia was battling a new form of malaria, in 1738, Charleston was becoming one of the first cities in North American to begin inoculating people against smallpox (McCandless 2011: 7). However, it was the selection of rice as the main cash crop which made Charleston (and the Lowcountry) an ideal breeding ground for the local mosquito vector for malaria (McCandless 2011: 12). Like Batavia, the city had a very high mortality rate for both slaves and women and men of European descent.

Not surprisingly, the city's leaders worried about its reputation, particularly because they wished to increase its population of freemen and women. However, racial priorities could easily govern others: many of the cities' leading citizens wanted additional immigrants from Europe because they feared being increasingly outnumbered by the slave population. Accordingly, they took great pains to underrepresent the extent of disease because they did not

want to discourage settlers from moving to Charleston, who might otherwise easily choose to settle in other colonies in North America (McCandless 2011: 123-124, 147-148).

This paper highlights the attempts to make sense of Batavia as a place that was unhealthy or insalubrious. Three colonial era texts furnish discussions about Batavia as a place defined by disease, but they also indicate that their authors were keenly aware that it was not representative of Java as a whole. In addition, the discussion will suggest that colonial knowledge, for all the criticisms thrown against it, was shaped by empirical evidence and highly nuanced. The three narratives which explored Batavia reflect a deep commitment to empiricism, here made evident in documentary evidence and statistical analysis. However simple, these depict an essential continuity for the practices associated with colonial knowledge making it. Last, connecting past to present, the paper will also suggest that it was precisely the reliance on statistics that provides at least a hint to the ways in which the years associated with COVID-19 may be remembered.

Ⅱ. The Guidebook Tradition: John Joseph Stockdale and the *Island of Java*

Island of Java was assembled from high quality travel writing and was published almost as a guide for Britons to learn about a place their forces would soon be deployed. For our purposes, this text represents the "guide" strand of colonial writing. Directing metropolitan readers was an important component of colonial discourses, particularly with the arrival of mass travel in the latter decades of the 19th century. The narratives which form Stockdale's *Island of Java* locate specific parts of Batavia as a site dangerous for disease. It might be added that the guidebook tradition—which at its very essence aims to structure encounters with unknown peoples and places—has a long history. What this paper suggests is that it may well be partly motivated by the fear of "reputational risk"—especially when the authors are writing from colonized areas for metropolitan audiences. The reputation of a place is not a mere

footnote to the story of Western cultural dominance or a haphazard manifestation of "colonial knowledge"; rather, it is likely to have been decisive in acquisition of information, selections of themes, articulation of authorities, and overall construction of narrative. In other words, managing a place's reputation was nothing less than the pre-structuring of a kind of "tourist gaze" (understood broadly).

Stockdale drew primarily from two published travel accounts: first, J.S. Stavorinus's *Voyages to the East Indies* (1797), translated from Dutch to English by S.H. Wilcocke; second, C.S. Sonnini's edition of C.F. Tombe's *Voyage aus Indes Orientales, pendant les annees 1802, 1803, 1804, 1805 et 1806,* published in Paris in 1810 (Bastin 1995: 1). A second expanded edition also included material from John Barrow's *A Voyage to Cochinchina,* published in London in 1806 (Bastin 1995: 2). The narrator (probably Stavorinus) focused on the swamps and similar environments as places where disease was omnipresent. Medical knowledge in the 18th century was not constructed on at least two assumptions which frame contemporary thinking: (1) the idea of disease as a distinct entity with its independent trajectory of development, distinctive modes of acquisition, and transmission did not yet exist. (2) contemporary authorities understood that swamps were good sources of disease, but they had yet to learn that the actual vectors were mosquitos. In other words, 18th century medical writing took place before the revolutions in medical thought associated with the Paris school of medicine, the germ theory of disease, and the discovery of the airborne vectors for malaria (and other diseases) reshaped medicine from the 19th century onwards. Above all, the texts deployed by Stockdale depicted Batavia as a special kind of unhealthy disease environment.

Accordingly, Batavia had a number of places which were deadly because of the swamp-like conditions. The author explained that it has "incontrovertibly demonstrated low swamp land, such as has been abandoned, or thrown up the waves of the sea, and countries overgrown with trees and underwood, are all extremely unhealthy, and frequently fatal to the great proportion of their inhabitants" (Stockdale 1811: 128). Batavia might be regarded as a citadel of prosperity, but, in fact, was actually "one of the most

unwholesome spots upon the globe" (Stockdale 1811: 129).

The narrator provided what might be understood as a history of how public health in Batavia declined from the 1730s. This was done with historical analysis, but backed up by writing focused on environmental considerations and detailed statistical analysis. Readers of the *Island of Java* might discover that Batavia's decline was indicated by its unusually high mortality rate, but if they followed the author's analysis in some detail, they might also glean that this situation originated from the intersection of commercial priorities and the local environment.

The beaches at Batavia exhibited the hostile climate and its disease miasmata. This miasmata was what defined Batavia's "disease environment." The author explained that "where the firm sandy beach commences, a dismal succession of stinking mud-banks, filthy bogs, and stagnant pools, announces to more senses than one the poisonous nature of this dreadful climate" (Stockdale 1811: 129). Furthermore, it is possible to see that along this "shore the sea throws up all manner of filth, slime, Mollusca, dead fish, mud, and weeds, which putrefying with the utmost rapidity by the extreme heat, load and infect the air with their offensive miasmata" (Stockdale 1811: 129). This aggregation of mud, carcasses, and putrefaction worsened during the "bad" (West) monsoon, which blows the "noxious exhalations" towards Batavia. In addition, the author also noted that to the West of Batavia there were low-lying areas often submerged under standing water. The author believed that these areas were places where disease existed. This was almost true: the reality, of course, was that standing water makes an excellent breeding ground for mosquitos.

The author also understood that malaria—a name not yet used—was easily identified by the description of the persistent problem in Batavia. The "intermittent fever" did not inevitably mean death once contracted, but in some instances continued "for many years" (Stockdale 1811:131) which tends to make women and men normalize the experience of it. Once they are "familiarized," they "scarcely think of it a disease, attending, in the intervals of its attack, to his affairs, and mixing in society" (Stockdale 1811:131).

In writing about malaria (and other fevers), the author had Europeans in mind. However, it should be remembered (and possibly studied) that outsiders with knowledge were often the ones which gave names to places—as the history of India, the Americas and Southeast Asia all can attest. However, when disease defines a place, the stakes were different because they often involved the potential for conquest, immigration, and commercial development. Largely in this context, the high mortality rate in Batavia underscored that it was a "most unwholesome place of abode" (Stockdale 1811: 132-133). Without providing evidence, the author noted that it had the highest mortality rate of all the VOC's holdings. He described how those who lived in Batavia had adapted to its disease environment.

> It is supposed that of the Europeans of all classes who come to settle in Batavia, not always half the number survive the year. The place resembles, in that respect, a field of battle, or a town besieged. The frequency of deaths renders familiar mention of them, and little signs are shown of emotion and surprise, on hearing that the companion of yesterday is to-day no more." When an acquaintance is said to be dead, the common reply is, "Well, he owed me nothing;" or, "I must get my money of his executors" (Stockdale 1811: 132).

The prevalence of disease was indicative of decaying urban areas in Batavia. In fact, the descriptions in the *Island of Java* illustrate that understanding disease in the 18th century meant being alert not only to the environment, but how it was affected by its interactions with human society. The "insalubrity" of Batavia has affected not only the disease environments in and around its beaches, but in the human manufactured canals which contained stagnant water (Stockdale 1811: 133). The tradition of descriptive writing—perhaps embodied later by John Ruskin's prose which often delivered word pictures to his readers—is probably a lost art, but in the *Island of Java,* it appears to exhibit the intersection of seasonal climatic events and a disease environment. Hence, the dangers produced by this situation varied with the season:

> Two principal causes are to be met within the city, and a great part of its insalubrity is to be ascribed to them; namely, the little

> circulation of water in the canals which intersect it, and the diminution of the number of inhabitants. The former is occasioned by the river, which formally conveyed most of its water to the city, being now greatly weakened by the drain which has been dug, called the Slokhaan, which receives its water from the high land, and carries it away from the city, so that many of the canals run almost dry in the good monsoon. The stagnant canals, in the dry season, exhale an intolerable stench, and the trees planted along them impede the course of air, by which in some degree the putrid effluvia would be dissipated. In the wet season the inconvenience is equal; for then these reservoirs of corrupted water overflow their banks in the lower part of the town, and fill the lower stories of the houses, where they leave behind them an inconceivable quantity of slime and filth: yet these canals are sometimes cleaned; but the cleaning of them is so managed as to become as great a nuisance as the foulness of the water; for the black mud taken from the bottom is suffered to lie upon the banks, in the middle of the street, till it has acquired a sufficient decree of hardness to be made the lading of a boat, and carried away. As this mud consists chiefly of human odure, which is regularly thrown into the canals every morning, there scarcely being a necessary in the whole town, it poisons the air while it is drying, to a considerable extent. Even the running streams become nuisances in their turn, by the negligence of the people; for every now and then a dead hog, of a dead horse, is stranded upon the shallow parts, and it being the business of no particular person to remove the nuisance, it is negligently left to time and accident (Stockdale 1811: 133-134).

The environmental afflictions associated with Batavia may well have contributed to the decline of trade as a second principal cause. This situation was partly the result of the rebellion in 1740, but the author wrote about the city as if it was being semi-abandoned by much of the population. While it is beyond the subject of this discussion, it is useful to refer to the descriptions of the depopulated town. In fact, the buildings that remained were “uninhabited and uncleansed, speedily contract in this low, warm, and marshy place, an infectious and foul air, and contaminate even the houses adjoining; and that this both causes and augments the unhealthiness” (Stockdale 1811: 135). The mortality was higher in the north part of the town which was lower. The author speculated that if these trends did not abate, it could produce “the total

abandonment and ruin of Batavia" (Stockdale 1811: 136).

It is significant that the author took the trouble to make sure his readers grasped that the high mortality rates were not attributed to other factors such as the hot climate. It was a common misperception, especially for those who had never been to the tropics, that excessive heat was the cause of unhealthiness of Batavia (Stockdale 1811: 139); however, there were many other places as hot, but without being identified with disease. The author was very much aware that travel writing often left too much to invention and the imagination. Accordingly, he concluded his discussion by carrying out a statistical analysis of mortality to drive home his assessment. To that end, he drew upon the records from Batavia's hospitals to determine if there were definitive patterns to the city's mortality.

Stockdale's author located the development of canals, which begun in 1733, as being the decisive event in making Batavia unhealthy. He drew upon the information supplied by local hospitals to trace the impact of canals. From 1739-1743, the mortality was "not quite so great" as 5562 of the Company's servants died in hospitals; in contrast, the figures for 1733-1738 was 8,286. However, the canals now developed the mortality between 1744-1771 which spiked to 48, 036, all dying in hospital. In addition, these numbers should be augmented by about a third because many deaths were concealed to avoid making payments to funerals.

At the same time, mortality proved to be a lens into some of the basic categories of colonial information. Proving the example of the mortality statistics in 1769, the travel writer related that 6,446 had died: these included 2,434 Company Servants, 164 Burghers, 681 Native Christians, 852 Mahomedans, 1,331 slaves, and 1,003 Chinese (Stockdale 1811: 144). Information from 1768 was marshalled to further contextualize the unhealthy character of Batavia: "out of five thousand four hundred and ninety Europeans, who were present at Batavia, according to the annual muster, on the 30th of June 1768, of which number, one thousand three hundred and thirty-eight were patients in hospitals" (Stockdale 1811: 144). Out of this number 1,338 died within the next 12 months. In the statistical analysis

which followed the conclusion was that the Company lost about one-fifth of its servants.

Therefore, the *Island of Java* had illustrated the cause, the course, and the history of the rise of mortality. This had been done with the use of the records from the hospitals, speaking with Batavia's residents, and seeing and studying the landscape. For our purposes, this analysis represents an attempt to comprehend the interaction of humans, the climate and landscape of Batavia, and the ways in which they began to shape local conditions. All of this was achieved without the use of modern medical thought and analysis and, yet, it was in many ways farsighted.

It would be cholera epidemics in the 19th century which would push European researchers to try to draw comprehensive pictures of places where disease was prevalent. And, it would be in the 20th century that statistics became essential for medical science—and currently, the way in which the world has made sense of COVID-19. The analysis of Batavia was also written with a sensitivity to what would later be called public health, but it was hardly medical knowledge. However, it certainly qualifies as "colonial knowledge," particularly with its Eurocentric presuppositions. The discourses remind us that for all its faults, colonial knowledge was deeply reliant upon data (where it could be found) and information. That is, at the heart of this project, like many others, was a deep faith in empiricism. Colonial knowledge has been the subject of organized derision, but if this relatively forgotten work is in any way indicative of it, then it might be admitted that it anticipates many of the categories (and practices) of the medical knowledge, a powerful force in the 21st Century.

Ⅲ. The Memoir: Major William Thorn's *The Conquest of Java*

Thorn informed his readers that his motivations to write *The Conquest of Java* involved preserving an accurate account of the military campaigns of which he had been a part. Thorn wrote with the same kind of passion for accuracy as did Major Snodgrass writing about the First Anglo-Burmese War. Both authors wished to

preserve the memory of an epochal event which they had lived through. He was clear that he envisioned a history with a strong empirical base, "adding to the Memoir a brief statistical view of the Islands of Java and Madura, substantially compressed from personal observation" (Thorn 1815: b5). Exploring Thorn's work enables this discussion to probe the memoir as a strand of colonial writing and practice.

Like Stockdale, Thorn believed that the credibility of his account depended upon documentation and statistical information. Thorn followed Stockdale's authors in focusing on Batavia as an unhealthy place. In fact, he argued that its reputation was sufficiently established to that describing its mortality rate was unnecessary:

> The idea of unhealthiness has become so completely associated with the name Batavia, as to produce an unfavorable impression against the whole of Java. But while the truth of the first must be admitted to the fullest extent, the injustice of the latter imputation may be proved by incontrovertible facts. The cause of the unhealthiness of Batavia are so generally known, as to render any minute disquisition on the subject wholly unnecessary (Thorn 1815: 250-251).

Instead, he wrote about what it is like (for Europeans) to live in Batavia amidst the inevitability of fever:

> Death's shafts fly thickest at the breaking up of the Monsoons, which is the most sickly period of the year….in no country is the intelligence of the decease of a near friend or relation received with less surprise or concern; which indeed is naturally accounted for by the rapid succession of scenes of mortality at that sickly period, when every day presents to the view a long line of funeral processions. But the melancholy train is generally beheld with indifference, on account of its frequency; and even the sable mourners commonly smoke their segars or pipes as they move along, with all the unconcern imaginable, though they are paid to mimick sorrow (Thorn 1815: 251-252).

Such was the reputation for Batavia that Thorn related that it could be set as a trap for British invaders. He explained that the

capture of Weltervreeden was important because it secured an objective that supported the "preservation of the health and lives of our soldiers" (Thorn 1815:33). In fact, the previous French leader Herman Willem Daendals, in the instance of a British invasion, had planned to "tempt us with the possession of Batavia, well aware that the unhealthiness of the town and noxious climate of the seashore would in short time destroy our troops" (Thorn 1815: 33). *The Conquest of Java*, then, illustrates the empirical value of the memoir tradition: namely, in the effort to capture the vivid quality of an event, the writer went to great pains to record as much as possible with the highest level of precision. Thorn's text is replete with extraneous information, but reflects the historical realities as its author faithfully attempts to recount it.

Ⅳ. Establishment Expert: Sir Stamford Raffles' *The History of Java*

Sir Stamford Raffles' *The History of Java*, originally published in 1817, represents yet another strand of colonial knowledge because it reflected the point of view of an informed, engaged senior administrator. Writing from the senior administrative perspective implied something very different from those who authored "guidebooks" or "memoirs" (which Raffles might also have done) because it came with a nearly comprehensive understanding of the subject. That is, the senior colonial official (Arthur Phayre [1812-1885] in Burma would be another example) could write about the place in which they served often with almost unparalleled resources. They would have access to all the government reports, which were often the only and definitive sources on many aspects of a society—especially up to date information on trade, education, legal matters, and communities' ongoing historical and public health (which includes disease and medical practices) reconstruction. They also had census information to support their writing. These authors also wrote with intimate knowledge of the practices (good and bad) of governance as well. Of course, they knew that their publications were bound to adhere to interests of colonial governance. Many learned indigenous languages, but most were limited in their understandings of the outlook of most of their subject populations.

Yet, scholars in the early 21st centuries would surely envy the materials (including access to key personages) from which they might draw. The best works—"classics" as such—that were produced from this strand of colonial writing remain relevant to the study of Southeast Asia—even if they say as much about the colonized as they do the colonizer.

The History of Java exemplifies this strand of writing because it draws upon vast learning to situate Java in time and place. This is the "expert" discourse of the time and one which was very critical of Dutch rule and a number of extant practices, most notable of which was slavery. Readers of *The History of Java* will find now dated, but very impressive learning informing both the book's analysis and narrations. Naturally, this is the colonizer's point of view—but it is one derived from a mind which did its best to engage indigenous peoples and practices and did so with a very broad view of the subject matter. Last, Raffles' encounter with Java was that of the mature Enlightenment: his opposition to slavery, backward Dutch practices and governing corruptions would have been recognizable in the critiques which late 18th and early 19th century directed at issues in Europe.

Unlike many colonial administrators, Raffles wrote *The History of Java* after he had returned to London from the archipelago. As early as the summer of 1815, Raffles began to collect materials for his history (Glendinning 2012: 145), and in November learned that Java would soon be returned to Dutch rule (Glendinning 2012: 147). He returned to Britain in July 1816, first stopping at St. Helena to meet Napoleon (Glendinning 2012: 150-151). In London, he engaged the unofficial Orientalist establishment; that is, he engaged with many Britons who had significant experience in Southeast Asia. Notably, while Raffles wrote his history, he was frequently speaking with Joseph Banks and William Marsden. In fact, *The History of Java* might be said to have been modeled after Marden's *History of Sumatra* (Glendinning 2012: 166). More important, perhaps, Raffles wrote with the knowledge that Java would be going back to the Dutch. Hence, it is easy to imagine how much frustration guided this volume, which he wrote in a relatively short period of time. Raffles must have been profoundly unhappy with the decision to

return Java to Dutch rule and his history might be regarded as a kind of commentary on that yet to be realized prospect (Glendinning 2012: 168). In any event, *The History of Java* now reads as an impressive testament to colonial writing (Noor 2020: 30), but it is useful to point out that it was criticized by a number of contemporaries (Glendinning 2012: 167). Raffles compiled significant information, but parts of the work were undigested, with some key discussions taking place in the appendices.

For our purposes here, Raffles had to address Batavia's disease history because by the early 19th century, it formed the way that Europeans understood the city. Unlike Stockdale's authors and Thorn, Raffles did not devote prominent parts of his history to disease. However, he did so in the first appendix to *The History of Java*, which was made up of an impressive array of statistical information, his analysis, and remarks from the superintending surgeon. The ability to produce this 17-page appendix is a good example of the resources available to the senior administrator.

The categories of the statistical analysis reveal the state (and capacity) of useful information open to a colonial official in the early decades of the 19th century. Raffles understood the limitation of the information, but still found it useful. The following tables present the evidential basis for the discussion on disease in Batavia:

Table 1. Data Summary for Tables Used in Appendix 1 (*The History of Java*)

Subject	Key Data Points	Notes
Table I List of Population, Marriages, Baptisms and Death in the towns and suburbs of Batavia from 1700 to 1813	Population broken down by European and "Europeans and Natives," by years (1737-1754) and inside and outside of "the walls"; Population broken down by European and "Europeans and Natives," by years "Within the town and all suburbs" and "In the Environs" (1755-1805).	

Table II List of the Deceased and Buried in several Burial Places at Batavia, from the Year 1730 till the month of August, 1752	Number of deceased by months 1730-1752	This table was translated from Dutch from a record which was discovered in Batavia.
General Abstract of the Monthly Return of Sick on the Island of Java and its dependencies, from 1st November 1813, to 30th October, 1814.	Types of Troops (European and Natives); Admissions and discharges; Deaths from fever and dysentery; Remaining sick for more than a month; Ratios of deaths to cures; Proportion of sick.	Military Document
General Monthly Average of Sick and Casualties on the Island of Java and its dependencies, from 1st November 1813, to 31 October 1814.	Size of unit; Sick; Cured; Dead; Proportion of Sick to Well; Average proportion of Death to Cures.	Military Document Dependent on the General Abstract (above)
General Monthly Average of Fatal Diseases, From 1st November 1813, to 31 October 1814.	Fevers; Flux; Other Diseases.	Military Document
General Abstract of the Monthly Returns of Sick on the island of Java and its dependencies, from 1st November 1814 to 31st December 1815.	Types of Troops (European and Natives); Admissions and discharges; Deaths from fever and dysentery; Remaining sick for more than a month; Ratios of deaths to cures; Proportion of sick.	Military document
General Monthly Average of Sick and Casualties on the island of Java and its dependencies, from 1st November 1814 to 31 October 1815, inclusive.	Size of unit; Sick; Cured; Dead; Proportion of Sick to Well; Average proportion of Death to Cures.	Military document Dependent on General Abstract (above)

State of His Majesty's 1st Battalion 78th Regiment, Shewing the Effective Strength and Number died (including those died of wounds) killed in Action & Half Yearly, from 16th February, 1797 five days after the Regiment's landing in India, to 25th December 1815.	HQ of Regiment and Dates; Effective Strength and Dates; Casualties (including deaths and killed in action); Total Killed; Time line.	Military document. 78th Regiment

These tables provided the statistical basis for Raffles' analysis of disease in Batavia. Raffles was more than aware of the fragmentary nature of his information. He understood that history usually must be written with less than complete source material. He explained that Table 1 was incomplete because part of the papers which would have been necessary to draw information from were ''lost or destroyed, amongst them the register in which was stated the Chinese population'' (Raffles 1830: iii). In addition, he lamented the loss of hospital lists because they would have provided more precise information on "European deaths" so that it might be determined whether those who perished were "inhabitant, military persons, strangers, or sailors or marines from the ships of the different nations in Batavia Roads'' (Raffles 1830: iii).

More important, Raffles could almost be heard to answer Thorn because his deep statistical analysis refuted any idea that Java was insalubrious or unhealthy. In fact, using the data which Raffles supplied led to the more precise conclusion that it was only in the beaches, swamps, and canals that Batavia was dangerous. The statistical evidence showed that Batavia's suburbs were much less unhealthy—if they were that at all. In addition, readers of *The History of Java* might learn that the climate was not intrinsically dangerous, but rather that those at greatest risk lived or resided near the miasmata or were first arrivals. These points were reinforced by the testimony of Robertson, the Superintending Surgeon:

> Such is the melancholy instance of the noxious climate of Batavia, which came under my own observation. That it was not epidemic is

> clearly evinced, from its not extending its influence to those who attended the sick, nor to the rest of the crew, all of whom escaped its attack and remained healthy. Among the Dutch who remain in the town, fevers are, I understand, very prevalent at all seasons, notwithstanding their being, in a manner, inured to the climate, and most of them have a sallow sickly appearance. It is not uncommon, in riding through the streets, to meet three or for funerals daily… [T]he Chinese, however, who are very numerous, suffer more than any class of the people; perhaps, from the worse situations of their houses, the manner of living. The number of casualties among them, I am told, is incredible, especially during the dry season; and if one may judge from the extent of their burial ground, and the number of their tumuli, it cannot admit of a doubt. (Raffles 1830: x)

Robertson not only had detailed knowledge of the ways in which disease impacted Batavia, but he was confident that he could explain why it took place. He explained that the "baneful effects of marsh miasmata on the human system is well known''; Robertson was referred to the ''engendering intermittent and remittent fevers, dysenteries'' (Robertson in Raffles 1830: x), which were prevalent because Batavia was "built almost in a swamp, surrounded by marshes in all directions, trees and jungles, which the exhalations being carried off by a free circulation of air" (Robertson cited in Raffles 1830: x). Robertson added that the swamps' "noxious exhalations" cannot be diffused because the jungle and houses have the effect of making them more condensed and deadly. This affected the pattern of mortality:

> During the heat of the day these exhalations are more diffused and comparatively innoxious, but when the sun withdraws its influence they become more condense, and amalgamating with the descending dews form a morbid atmosphere around the houses of the inhabitants. This hypothesis will readily account for a fact well known, that people whose commercial concern require their presence in Batavia during the day, and who retire during the night into the country, escape this endemic, while any who sleep in the town, even for a night, unless those who, by a long residence, are inured to it, escape. (Robertson cited in Raffles 1830: x)

Robertson explained that the diarrhea and dysentery were a

result of the polluted water, which added to the difficulties of living in Batavia. In contrast, Weltevreden—3 miles away and not exposed to the swamp, was exempt from the "endemic fever," though diarrhea was common "especially among those newly arriving''; but these cases were rarely "serious'' or of an ''alarming nature'' (Robertson cited in Raffles 1830, x). Furthermore, Raffles was consistent with the strand of Enlightenment British historical writing about the East Indian archipelago which explained that it was a part of the world which held great potential, if only the Dutch and the indigenous population did not mismanage it (Tsao 2013: 462-467).

In addition, he directly attacked the link between Java and disease by rejecting one of the myths about it:

> The unhealthiness of the climate of Batavia is connected, in the minds of many, with the fabulous properties of the poison tree of Java, and many are so ignorant of the island as to consider the climate of Batavia as a fair example of that of Java in general. History attests that this city has been highly pernicious to the health both of Europeans and Natives, almost from its foundation, and recent experience concurs with the testimony of history (1830: viii).

The mature Enlightenment, with its rejection of slavery and openness to rethinking social inequality, was evident in Raffles' tempered judgement about what Dutch colonization had done to both Batavia and Java:

> The mines of America, when they were first discovered, did not more strongly allure the Spaniards, nor urged them to sacrifice more relentlessly the lives of the unresisting natives to their burning thirst of gold, than the monopoly of Java and the Spice Island let the Dutch Company, in the track of wealth, through danger, injustice and oppression. Though the unhealthiness of Batavia was at all time known and formidable, there were times when the mortality became extraordinary and alarming (1830: viii-ix).

Raffles explained that in the 18th century, the East India Company had already concluded that the "insalubrity" resulted largely from "the situation of the town in bay" where swamps contained exhalations of "the most noxious kind (1830: ix)" Java did

not deserve the reputation for unhealthiness and Raffles explained that including an extract from the superintending surgeon helped to demonstrate that it was Batavia which endangered health, without affecting the "general salubrity of the climate of Java" (1830: xii).

The disassociation of Java and disease was prominent in Raffles' analysis and reflected the perspective not only of someone with deep knowledge of the island (and its environs), but also of the voice of a senior administrator. In this sense, Raffles wrote about Java as an authority who like those in Charleston carefully sought to present the city and the Low Country in the best possible light; failure to do so might have significant commercial implications. N. Currie, the Surgeon of the 78th Regiment, commented in his extract that

> Java need no longer be held up as the grave of Europeans, for except in the immediate neighbourhood of salt marshes and forests, as in the city of Batavia, and two or three other places on the north coast, it may be safely affirmed that no tropical climate is superior to it in salubrity (Currie cited in Raffles 1830: xvi).

Ultimately Raffles would be disappointed by Java—not because it possessed a reputation for fever and disease, but because of its return to the Dutch at the end of the Napoleonic Wars. Nonetheless, British investment in Java continued for more than a decade. Notably, British plantation owners brought steam power to enhance the efficiency of sugar production. Merchant houses in Calcutta and London continued their operations in Java. For instance, at Bekasi, Jessen & Trail, a joint British-Danish company, built a steam-driven mill in 1820, modelled on an example taken from colonial experience in the West Indies (Bosma 2013: 89). These efforts suggest that many British commercial leaders were not only prepared to invest in Java, but like Raffles must have experienced significant disappointment with the Anglo-Dutch Treaty of 1814 which returned Java (and other possessions in the archipelago) to the Dutch.

Ⅴ. Conclusion

This paper has been written under the shadow of COVID-19. While the course of the pandemic remains before us, it is already safe to say that it is probably the world's biggest global event since World War II. COVID-19, with all its ambiguities, has been the perfect disruptor for a data driven world: it has shattered the cozy comfort of developed societies, which for nearly a century—with a few notable exceptions—had successfully banished infectious disease from being an active part of everyday life. COVID-19, without being particularly virulent, has ripped apart the modes of national, regional and global interactions, which in turn produced new forms of transregional communication and cooperation.

All of that said, this discussion has focused upon the ways in which a number of colonial writers understood disease in Java, especially Batavia. Early in the COVID-19 era, an argument—which is not likely to be settled anytime soon—broke out about its place of origins. This should not have shocked anyone: the connection (and related disputes) between diseases and places has a long history. While it is useful to recall the ways in which disease was used by external parties to define Southeast Asia, it might even be more important to situate such characterizations against a few famous counterexamples: the Ottoman Empire's "the Sick Man" of Europe, the more recent debates about the geographic origins of HIV-AIDs, and the misnomer "Spanish flu" all come to mind.

In this instance, we have seen a different type of connection: namely, that Batavia and possibly Java were inherently unhealthy. Colonial authors established that even though an endemic disease environment could be documented in Batavia, it should not be understood to characterize Java. More interesting, perhaps, it is useful to recall that the identification of a place with disease (especially when severe illness has been banished to the margins of human experience) has had sinister implications. Susan Sontag reminded us in *Illness as Metaphor* that when disease becomes a signifier, it means that the object is often massively devalued, dehumanized, and even worse (1977).

Batavia's disease environment, which bears a striking resemblance to one which developed in Charleston, South Carolina, was described in great detail by European authors who sought to understand why in their words it was so "insalubrious." Their descriptions of the swamp, beaches, and canals which produced the miasmatic exhalations reflect a sophisticated understanding of the interplay between environments and disease. When they wrote about parts of Batavia as a disease environment (our term), they were certainly describing a situation where the practice of social distancing might have made some sense. Yet, their strongest arguments came from the detailed statistical information which allowed them to assess the disease patterns and evaluate how and where it was situated. They understood the impact of the disease through statistics—even if their data now seem simple. In this sense, they anticipated one of the central realities of COVID-19, which has been the ostensible reliability of data. The widespread generation and publication of data has driven virtually every response to COVID-19 and it has been culled from virtually every segment of human experience: from regions to molecules. The world that will follow—where COVID-19 has become history and malaria will probably remain as a key global health problem—may well underscore the importance of social distancing, but *homo untact*, as such, will not have threatened the hegemony of *homo indicina*. This last concept refers to an informational and data manufactured world (followed by related conceptual practices) in which the human subject has effectively become an object. As such, humans are a kind of index to be mined and analyzed by those who will control Big Data and Artificial Intelligence. Therefore, in looking back to the discussions about Java (and Batavia) there is warrant to speak about the use of data for medical research as a recognizable continuity. Those such as Robertson who knew with proud certainty what had caused the "intermittent fever" in Batavia were in a curious way part of the development of modern medicine.

And, yet, they were wrong. In fact, it would not be until the end of the 19th century when the work of Ronald Ross (1857-1932) established mosquitos as the key vector in the transmission of malaria (Porter 1997: 468). Swamps produced ideal conditions for

mosquitos to thrive, but the air—however unpleasant to breathe—did not cause disease outbreaks. Malaria, in its many variants, was much more than the name intermittent fever would suggest: it is actually an ancient disease that has shaped global inequalities and continues to make worldwide impact in the 21st century.

To read these colonial authors' attempts to understand disease in Java (or Charleston for that matter) was to see them use all of their tools to make sense of an endemic situation—without even knowing about microbes, bacteria, mosquitos as vectors for key diseases and many other things which were to take place in the medical revolutions of the 19th and early 20th centuries. Their efforts, even with the use of statistics—an underrated tool for medicine—was actually ahead of the curve. Roy Porter has pointed out that the use of statistics—a science with its roots in European state building—was already being deployed in the last decades of the 18th century (1997: 293). He cites the example of Johann Peter Frank (1745-1821) who developed the concept of medical police. Frank began to capture statistical information from cradle to grave (Porter 1997: 293). However, this early use of statistics—like that of Raffles—was in the service of statecraft. Medical knowledge in the 19th century—particularly in wake of the cholera epidemics—would later advance by studying disease as it occurred in human populations in order to find both cures and therapeutics. For instance, in *Epidemics and Society*, Frank M. Snowden noted that the Paris School of Medicine was redefining medical study, which included observation, detailed analysis of patient symptoms and attempts to find numerical correlations, of what was observed (2019: 182).

Ironically, Raffles who had clearly understood the need to separate all of Java from disease was also ahead of his times in devoting an appendix on the subject in *A History of Java*. Unlike Stockdale's authors and Thorn, Raffles removed the subject from his narrative and isolated it with an appendix. Raffles anticipated the broader cultural norm of globalized societies to achieve medical civilization by deemphasizing the presence of death and disease. COVID-19 has reminded us that it might be best to recall the disease in history as often more than "background noise"—as

William McNeill in *Plagues and Peoples* famously labeled it nearly half a century ago (1976: 12).

Malaria would have a long and ongoing history in Indonesia. Scholars have chronicled the different approaches to controlling the disease during the colonial period, which included some of their adaptations to many of the key developments which marked the rise of both medical science and public health. Hence, little more than a decade after Raffles departed Java, the Dutch created the Civil Medical Service (1826), which would serve Java for nearly a century. In addition, medical schools were opened in Jakarta (1876) and Surabaya (1913), and in 1924 a Central Malaria Bureau (CMB) was created. The CMB would train over 100 specialists for carrying out anti-malarial measures (Elyazar et al. 2011: 21). After Indonesia achieved independence, its government took a range of measures which capitalized on scientific research. For example, the discovery that DDT provided an invaluable resource for anti-malarial procedures led to the goal of eradicating the disease in Indonesia. Following the launch of the Global Malarial Eradication Programmer (GMEP) by the World Health Assembly in 1955, the government initiated a program aimed to eradicate the disease by 1970. The attempts to eradicate the disease by first dividing the country into 66 zones and then attacking them with DDT produced mixed results (two vectors—*A. sundaicus* and *A. aconitus* quickly developed immunity towards dieldrin), with malaria cases increasing substantially in the late 1960s (Elyazar et al. 2011: 28-29). Consequently, Indonesia resumed attempting to control the disease and eventually in the 21st century came the call to "roll back" malaria (Elyazar et al 2011:20-32). In virtually every instance, the anti-malarial measures were conducted against the disease in specific geographic locations. If Batavia did not define Java in the 18th and early 19th centuries, it was nevertheless the case that the presence of malaria did define the living conditions of many places in Indonesia.

Students of Southeast Asian Studies know that the history of medical traditions, disease outbreaks, and the development of public health and "tropical medicine" are all part of its basic frame of reference. However, the opportunity for "area studies" may be to move the subject from the status of an appendix to something

which forms more of Southeast Asia's basic narratives. In 2018 ASEAN's leaders targeted malaria for elimination for a reason. Medical researchers have cautioned that the responses to the disease across the Asia-Pacific need to resist relying on lessons learned in Africa. Instead, J. Kevin Baird and others suggested that a number of factors unique to the Asia Pacific region were significant in attempting to eliminate the disease from the region by 2030 (2017: 371-377). Nonetheless, the output of malaria research which focuses on Southeast Asia lacks urgency—a reality which will not be helped by the attention given to COVID-19. (Andersen, et al. 2011)

When disease defines a place, it alters its status and impacts its peoples. Even if the disease has not been understood, the association continues to carry reputational risk. COVID-19 has not created risks for distinct geographic spaces as malaria did for Batavia and Charleston. Yet, it has already produced highly contested arguments about its place of origin, best modes of treatment and the intensification of some national rivalries. As COVID-19 moves forward, then, the opportunities for disease to provide definition to geographic spaces should not be underestimated.

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