FORM FOLLOWS FEVER

MALARIA AND THE CONSTRUCTION OF HONG KONG, 1841–1849

Christopher Cowell

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Form Follows Fever: Malaria and the Construction of Hong Kong, 1841–1849
By Christopher Cowell

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Preface

The completion of this book marks a double tragedy. The second, our recent pandemic has reanimated my writing on the first, a deadly epidemic and its effects on the colonisation of Hong Kong Island in the mid-nineteenth century. It was an outbreak that indelibly altered the fledgling city. I began reviewing my work on this subject just as we started experiencing the early stages of Covid-19, the first global pandemic since the Spanish Flu. Our local sense of society and space had become fractured and cellular in extended lockdowns that stretched from the eastern to western hemispheres, revealing the constructed fragility of our communities. As a distant echo, Hong Kong's urban beginnings along the northern shore of its island were also fragmented and secluded. Immediately forged in uncertainty, its community staggered through a series of crises, first political and economic, and shortly after, epidemic. It was a tragedy of lost lives and squandered opportunities. Yet this forming, rupture, and reforming across the 1840s infused the city's muscle memory with a formal resilience, one through which we can trace stubborn examples of its physical language, including relentless land reclamation, building climate control, and vertiginous construction. The population's evolving conception of disease and its relations to the terrain, innate and made, was foundational to this transformation.

This study is the first in-depth historical account of the beginnings of Hong Kong society and its urbanism. It is a rare thing for a historian to be able to examine any city's formation and determine its constituent elements. But Hong Kong's circumstances were also highly peculiar, the basis for its existence intentionally uncertain. When I wrote the core of the manuscript more than a decade ago, while studying at the Department of

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History at The University of Hong Kong (HKU), my initial intention had been to uncover and explain the motives and politics of colonists that drove the early construction of the settlement on the island. Surprisingly, what best tied the materials together as history was the outbreak of an epidemic, waves of malarial attacks stretching from the summer of 1841 onwards, though cresting in 1843. It turned out that the most poignant way one might attempt to explain the architecture and urban pattern of the young city was as manifestations that recorded in their making both the fears and opportunities of settlers brought about by a precariousness of life wrought by the disease. During the first half of this decade, the 1840s, the island gained a terrible reputation as a diseased and deadly location. Visual evidence of the time conveys as much about the paranoia and perils of life on the island as the textual, and both have been used interconnectedly throughout the book. The disease also accentuated the brutal colonial politics of race and class and the contours of privilege traced in well-timed land grabs that disempowered vulnerable sections of the community in favour of others. Imagery is never innocent. This study emphasises how Hong Kong's 'construction' was, by necessity, both physical and imagined, as it altered over time. So, my project mutated into a landscape history wherein settlers re-evaluated the topography, geology, society, and building of the early city settlement along the northern shoreline of Hong Kong Island in a desperate attempt to understand the nature and causes of a sickness that was killing them. This leveller was called 'malaria', as in 'bad air', believed to be a gaseous emanation from the land. Since malaria was considered a low-lying gas, it soon compelled the young city to be conceived of in 'section' as a divided community living at differing heights and atmospheres. Disease, therefore, added this vital third dimension to colonial urban space and division. When it comes down to it, histories of urban epidemics are, in fact, histories of political opportunity, separation, and social change. The question is, into whose hands does this power fall?

The research and writing of this book have involved the help and generous advice of many friends, colleagues, and institutions, and I sincerely apologise to those I have missed. I must begin my thanks with Dr. Peter Cunich. He was head of the Department of History at HKU when I joined it more than fifteen years ago. I was already a design tutor at the Department of Architecture, and moving into history as a discipline was daunting for me, but Peter took me under his wing. He became more than a supervisor; he became a mentor and a friend. I thank him for his patience, methodological care and training, his passion for history, and, equally, his compassion towards his students. Peter's

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approach has indelibly shaped my early training as a historian. Professor John Carroll, one of our great Hong Kong historians, had just joined the department. John shared with me, on countless occasions, detailed advice and the sum of his experiences, ranging from archival approaches to writers and the broader field of research. I have enjoyed our many warm discussions. He generously reviewed this manuscript in its earliest form, chapter by chapter. Early in my work, Dr. Elizabeth Sinn at HKU's Centre of Asian Studies (now part of Hong Kong Institute for the Humanities and Social Sciences) kindly shared her research into early Chinese culture, especially concerning the dim pre-colonial history of stonemasonry on the island. This insight led to my understanding of a relatively sophisticated culture of construction labour and building contracting within the region that the British used rather than created. As I wrote the manuscript, I had the privilege of many enjoyable conversations with Jonathan Wattis, Hong Kong's preeminent map dealer. His boundless passion and imagination for Hong Kong history and his expertise in regional paintings, drawings, and maps have challenged, provoked, and inspired my interpretations. Dr. Graham Mooney, at the Institute of the History of Medicine at Johns Hopkins University, has kindly shared his expertise on the literature of malaria and medicine concerning urbanism. It has, I hope, made this work stronger, as it has enriched my sense of the lines of research within this specialist field.

Despite my subsequent doctoral research at Columbia University having shifted emphatically towards India, Hong Kong history occasionally stormed back in. The most significant incursion began with a surprise communication I received from Derek McDonnell, founding director of Hordern House, Sydney, and one of the world's leading antiquarian book dealers. Ironically, he contacted me just as I was heading back to New York from a conference in Sydney, so we failed to meet. A recent trove of long-lost watercolours by the architect Edward Ashworth surfaced in Australia. Purchased by Hordern House, Derek asked for attribution and help in identifying each painting, its date, its context for the artist, and its relationship to Ashworth's movements. The peripatetic English architect has proved to be an outsized figure in colonial urban history, not just for early Victoria in Hong Kong but for Auckland and Sydney. He provides a rare linkage to the nascent construction industry on Hong Kong Island and is a crucial illustrator of the city's growth. And so, the second phase in my research work on this period of Hong Kong began and of a more intense architectural and scenographic nature. I completed the catalogue in late 2014, and to my delight, the Hong Kong Museum of Art purchased

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the Hong Kong portion of the collection. The book benefits immeasurably from their inclusion, and apart from the catalogue, these works have not been published before nor situated in their proper context against other visual evidence. I must thank Derek for reviving my explorations into early Hong Kong and opening up further dimensions from which this book has benefited.

I thank my friends and fellow travellers on the historian's path. Dave Macri, then completing his PhD in the department, inspired me with his meticulous attention to detail and his forensic approach towards research, all churning within his ever-growing database. I have been fortunate to share experiences and insights with Cecilia Chu, Chang Jiat-Hwee, and Cole Roskam, architectural historians then at Berkeley and Harvard, respectively, who all coincidentally converged in London just when I needed them the most and was finding my feet in the various archives. They have, perhaps unwittingly, planted the seeds of many disciplinary branches in my secondary literature knowledge. I must also mention two good friends, Humphrey Yuen and Lawrence Tse, whose passion for the dwindling built heritage of Hong Kong corresponds with my own and with whom I have spent many hours thinking about the history of Hong Kong from various vantage points. At HKU's Department of Architecture, I must thank Zhu Tao and Eunice Seng, who gave me much helpful advice on extending my research. Tao became a sounding board, helping me to frame my broader thoughts and providing critical and theoretical insights. If Tao and Elaine Zhu had not approached me in 2020 to contribute an article on disease and urbanism in Hong Kong for their SpaceAction China blog, this book would likely not have come about. In parallel, as part of this unfortunate zeitgeist, I was invited by Ian Tan, co-editor, to contribute an abridged form of my earlier writing on malaria and early Hong Kong for the *Hong Kong Institute of Architects* (HKIA) *Journal* later that year, further signalling reader interest in a book.

I must also thank several archives and staff for their generous help. Though in a fragmented state, the Hong Kong SAR Government's Public Records Office stands out among these, with thoughtfulness and care from the staff that I was more than eager to receive while adrift in historical drawing materials. Most fortunate has been the discovery of T. B. Collinson's family letters and valuable references contained in the card files of the Carl T. Smith Collection. Also within Hong Kong, The University of Hong Kong's Special Collections had become a months-long nocturnal home for me. The Morrison Collection's mid-nineteenth-century newspapers and the library's extensive microfilm and

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microfiche collections have proved extremely valuable. The British Library in London was essential for various rare nineteenth-century publications, particularly travel journals and periodicals, including the *Professional Papers* of the Royal Engineers. The Royal Institute of British Architects (RIBA) Library and its staff assisted me in exploring specialist architectural journals of the period, such as *The Builder*, Edward Ashworth's dictionary entry on Chinese architecture, and other valuable contemporary commentary within the discipline. Staff at the Caird Library and Archive at the National Maritime Museum, Greenwich, London, helped with my investigations into various naval materials, particularly surgeon Edward Cree's extraordinary illustrated diaries. I got lost in The National Archives at Kew, particularly among its CO 129 materials (the Colonial Office's enduring code for Hong Kong) and the War Office's visual documentation. This repository has proved vast and vital for almost all governmental correspondence between Hong Kong and Britain, contained in reports, memos, ordinances, legislation, and various maps, plans, and drawings, much of their counterparts destroyed in the invasion of Hong Kong during WWII. Outside of London, I must thank the Institution of Royal Engineers for permission to spend some days at the archive and library adjacent to their museum and barracks at Chatham, Kent, a space they specially opened for my use. The library has offered a wealth of further published and unpublished materials on their endeavours. I must also thank Matheson & Co., London, for granting access to the substantial Jardine Matheson Archives at The Department of Manuscripts and University Archives, Cambridge University Library, revealing the ambitions and fears of colonisation by the most significant single investor on the island.

For the compiling of this book, I must thank the following institutions and individuals for their kind permission to use various visual sources: The National Archives, Kew, London; the Hong Kong Museum of Art, Hong Kong; the Caird Library and Archive, National Maritime Museum, Greenwich, London; the Peabody Essex Museum, Salem, Massachusetts; the Public Records Office of Hong Kong, Hong Kong; the British Library, London; the Alexander Turnbull Library, National Library of New Zealand, Wellington, New Zealand; the Yale Center for British Art, Yale University, New Haven, Connecticut; the Baker Library Special Collections and Archives, Harvard University, Cambridge, Massachusetts; the Wellcome Collection, London; Mr. Anthony Hardy, Sze Yuan Tang Collection, Hong Kong; Mr. Richard Castle, Castle Fine Arts Inc., Sacramento, California; the UK Hydrographic Office Archive, Taunton, Somerset;

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the Victoria & Albert Museum, London; and the Barry Lawrence Ruderman Map Collection, Stanford University, Stanford, California.

I understand this book to be pioneering in the oeuvre of The Chinese University of Hong Kong Press (CUHKP), introducing colonial architecture and urban history in Asia as new strands in the publisher's long-standing work on Chinese art and architecture. I was keen to approach them, recognising CUHKP's unique mission to publish their works in English and Chinese and desiring the book to reach beyond the English-speaking world. And so, I must thank the Press for their unstinting dedication and care in realising this project, first here, for the English edition of the book. I thank Director Qi Gan and Acquisitions Editor Minlei Ye, both of whom, to my delight, immediately saw the work's worth and remained committed and enthusiastic throughout the lengthy peer review. At the other end of production, I am very grateful to Zoe Ross, my indexer based in Edinburgh, for her careful eye and for working extremely hard to finish the work within a tight timeframe. But, in particular, I must thank my editor, Brian Yu, for his sensitive and patient efforts as he accompanied me through the various stages of production. I must apologise to him and his colleagues for the numerous delays on my side as I juggled teaching commitments and moved country. But the result speaks for itself: a product surpassing expectations. This book has been generously supported by a publications grant from the Paul Mellon Centre for Studies in British Art and a second grant from the Trinity College Dublin Association and Trust. I am both glad and relieved that this hitherto neglected yet strange and fascinating early history of colonial Hong Kong can now be read, pondered, debated, and imagined across the English- and Chinese-speaking worlds in all its rapid and raw drama, and hopefully make better sense of modern Hong Kong.

Chris Cowell
London, December 2023

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A Note on Names

For consistency, most Chinese location names, names of persons, and other proper nouns will appear either in Pinyin or, if localised and of current Hong Kong familiarity, in the English spelling customarily used. However, discrepancies will arise, for instance, when a proper noun gains familiarity within contemporary (mid-nineteenth-century) English literature, such as the 'Treaty of Nanking' or the island of 'Chusan' ('Zhoushan' in Pinyin). Where there are multiple contemporary variants, such as the unratified 'Treaty of Chuenpeh' or 'Chuenpee', which is also spelt 'Chuenpei' or 'Chuenpi' in modern phoneticised English from Cantonese, I have used Pinyin as the final arbiter: 'Chuanbi'. Personal Chinese names, such as those of well-known Chinese officials, are spelt using Pinyin (for example, 'Qiying' instead of the contemporary British 'Keying'), whereas those of, say, local Chinese in early Hong Kong, for want of alternative Chinese documents, adopt the spellings given to them in the original English sources, such as Loo Aqui and Tam Achoy.

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CHAPTER 1

Introduction

> When to the foregoing calendar of horrors, we add the malignant fever, which swept off foreigners by the score, due, as was supposed, to the noxious gases exhaled from the surfaces of decomposed granite laid bare during the erection of the city, we must admit that the island fairly earned its reputation as the grave of Europeans.
>
> Both it and the native inhabitants have undergone marvellous changes within the last twenty-five years. A splendid town has been built out of its barren rocks; and the hillsides are covered with trees, which not only enhance the picturesqueness of the place, but are of great value in purifying the air, and improving the health of the population.
>
> —John Thomson, 'Hong Kong', *Illustrations of China and Its People*, 1873.

When the Scottish photographer John Thomson wrote his entry for Hong Kong before embarking on his pioneering journey into China, the port city had become a haven for foreign residents and flocks of curious tourists. For many westerners, including Thomson, encounters with China began now with Hong Kong. It served both as a basecamp and gateway. It framed the vast mainland in sharp juxtapose as a first point of reference. The grand arcades and terraced streets balanced, in their solid assurance, the transience of the island community. The recent afforestation of the once-stark hillsides filled the air with a moist fragrance as if a city within a garden oasis. Trade was humming. Crime was containable. It was now a colony with a counterpart, Kowloon, beaming at it across the harbour (**fig. 1.1**). But old-timers did not have to cast their memories that far back to recall how this transformation had been far from certain; how, in fact, Hong Kong had nearly failed.

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Fig. 1.1. J. Thomson, View Along Waterfront Road (now Des Voeux Road), Hong Kong Island, 1868. © Wellcome Collection, London (18693i).

Hong Kong's early urban history—comprising then just the island—has been written in several ways, from studies on land conveyancing and its civil and commercial administration to the growing influence of Chinese elites. Yet it is odd that this, one of our major world cities, lacks a coherent study of how the settlement, then a colony, was precariously established and *physically* developed in the mid-nineteenth century. We still do not systematically understand how the place transformed, from what Britain's then foreign secretary, Lord Palmerston, would famously denounce as a 'barren Island with hardly a House upon it', into a fully functioning city.[1]

In reading through a range of source material it is evident that the beginnings of settler life in the colony of Hong Kong in the early 1840s was anything but smooth. It was pockmarked by a variety of traumas, both human and natural, with, at times, the natural upheavals inadvertently amplified by the manufactured. As with many other locations

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across both tropical and subtropical regions settled on by European colonists, Hong Kong's early foreign population had to deal with the consequences of an aggressive climate: typhoons and tempestuous rains, scorching hot and humid days, combined with unexpected fires that swept through the early bamboo, matting, and timber city like a match to tinder. Among the manufactured shocks were the personal attacks on the early settlers from local brigands, highway robbers, and sea-faring pirates, and the occasional night attacks on warehouses and homes—the culprits escaping by slipping across the harbour into Chinese territory and outside of the town's fledgling jurisdiction. In contrast, British colonial justice was often meted out to both the deserving and undeserving harshly, peremptorily, and with blatant racial bias. As familiar history recounts, the new inhabitants fell victim to petty politics, the small, island-locked government intent upon demonstrating its new presence, issuing ordinance after ordinance as if to amplify its sense of self-importance, but with the effect of stifling the spirits of those optimistically engaged in commerce.

One of the most frightening and significant traumas to affect the fledgeling city was the emergence of wave upon sudden wave of human sickness. It would shape the reactionary strategy of settlers in the planning and construction of their settlement and its infrastructure and provide a symbolic imprint that carried several other manufactured traumas in its wake. 'Frightening' because these fevers struck, at first unexpectedly, in different positions across the city and sometimes in a brutal manner. The small group of medical professionals upon the island developed several theories to explain these deadly fevers and to support their uncertain countermeasures. In this pre-bacteriological world, the locus of the malignancy was thought to reside in the elements: in water; in rank vegetation; from within decayed rock; the misalignment of strange electromagnetic forces; or from the rays of the sun at its zenith, and the subsequent exuding of airborne contamination. There was ultimately no escape from the 'miasma' except by collective action in order to reform the city itself.

Hong Kongers' perceptions of their colony in the face of these threats to their well-being and, conversely, how remote outside audiences perceived the territory acted as significant pressures, agents of transformation. We must examine these in concert if a meaningful study is to be made on how the city developed and established an initial physical and behavioural pattern. This book examines, in detail, the first nine years of Hong Kong's development, presenting it as a sequence of related events, their causes and reactions, that provided the city with its 'accidental' urban grammar that would serve as its future template.

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Malaria as Miasma

It is not the intention to pin an entire city creation story and its urban morphology upon the presence of malaria. One may look at the urban and architectural 'birth' of colonial Hong Kong through the lens of its economic and mercantile ambitions, of its rapid multi-ethnic immigration and the attendant threats to its peace and security. Or one can examine it from a traditional historian's perspective, through its political and local government development and its relations with Qing Dynasty China. Nevertheless, of all the underlying motifs that could be called upon to explain the decision-making processes that contributed to its physical development, contemporary concerns of *health* and *well-being* form the most natural glue. More than any other theme, these overarch and tie the disparate storylines, making collective sense of both the perceptions and responses of the early colonists towards the shaping of both space and discourse. Of these concerns, nothing so preyed upon the mind than that fatal ailment that seemed to arrive and depart within the warmer months of each year, yet whose manifestation, location, and virulence seemed to escape preparation. European settlers even gave the worst outbreak the name of the island itself, the 'Hongkong Fever', in 1843.

In addition, while many case studies of settlements around the world analyse the urban effects of disease upon changes to various governmental hygiene policies; upon the development of housing and construction; and the formation of sanitation infrastructure within cities and towns across the nineteenth century in both the tropical and temperate spheres and across colonies and metropoles; few can be said to offer as dramatic a study as that of the beginnings of colonial Hong Kong. Despite a significant Chinese population along the southern part of the island, new settlers perceived the stretch of coastal land to the north as a tabula rasa, a blank slate. Upon this, colonists vigorously interrogated their first impressions at a fundamental level, of topography and basic shelter, in response to sickness. Malaria, quite literally, operated as a transforming force upon the colony's genesis story.

The name malaria, derived from the Italian *mal'aria*, in turn derived from the Latin *malus aria*, 'bad' or 'evil air', betrayed a general belief that the disease was airborne, certainly up until the 1880s. The dominant view among most medical professionals in Europe during the 1840s was that of 'miasma theory' and 'contagion theory'. As Roy Porter neatly puts it: 'If it arose from the bodies of the sick, it would be called contagion;

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if from marshes and standing water, miasma.'[2] 'Germ theory' would only be postulated within medical circles from about the mid-1860s.[3] In his report for the Hong Kong government's annual Blue Book to parliament in 1850, the Colonial Surgeon William Morrison pondered:

> The exact operation of those subtle atmospherical influences called malaria on the human body is one of the great mysteries which will only be revealed when we are able to solve the rationale of those laws of attraction and repulsion by which form is given to matter, and millions of worlds are permitted to revolve in space without danger of collision.[4]

Therefore, an obvious question arises: *Was the 'Hongkong Fever' actually malaria?* This present study does not attempt to answer this question from a current understanding, in part because what we now consider to be 'malaria' cannot be presumed to match what was then understood to be the same disease. The problem is essentially one of defining. 'Miasma theory' is a branch of disease aetiology (causation). From western antiquity up to the latter half of the nineteenth century, it was a generally held belief that disease could be caused by 'gases given off by putrefying decomposing organic matter, rotting flesh and vegetables'.[5] Before the development of the microscope and a more significant focus upon pathogenesis (the mechanism by which an aetiological factor causes a disease), the inability to map the changes in cells and tissues within the human body inevitably resulted in a focus upon the external. European doctors within the armed services in the 1840s were united by a belief that fevers arising from the (euphemistically named) China Expedition, military excursions often upon or by land that was marshy or surrounded by paddy, were caused by malaria.

> . . . The prevailing Diseases in the Naval Forces in China have been Remittent, and Intermittent Fevers, Acute Dysentery, and occasional Cases of Cholera.
>
> Now the Remittent and Intermittent Fevers, and in some degree the Dysentery are known to arise from Malaria, or Marsh Miasma . . .[6]

Malaria's invisible operations could only be identified through association with various symptoms. For example, one writer, evidently a doctor—since he signed himself anonymously as *Medicus*—wrote to the local Hong Kong press in 1844, enclosing his thoughts upon the nature of malaria and protections required.

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> This, like heat, is an invisible, mysterious agent, but very deleterious to the human constitution. We cannot explain its modus operandi, and how much less do we know the laws which regulate its production, diffusion, and influence; and yet we are fully assured that such a poison is eliminated, from the earth's surface, at certain seasons and places, and that when it comes into contact with our bodies, that we are seized with fever, dysentery, and other disorders, which destroy myriads of people every year, especially in the tropics.[7]

Malaria was, therefore, thought of as an external agent that brought about fever, but not the fever itself. This aspect is important to note. Until we get to germ theory and the concept of infection, malaria was considered as a miasma or vapour: a nebulous, gaseous phenomenon that sickened or weakened the human constitution to the point where fever was an outcome. In this regard, one can consider that Hong Kong, as with other stations on the China coast, became a theatre for malaria and the fevers they induced—according, that is, to the paradigm of medicine at that time. That the fevers themselves were caused by malaria as we now know it—the protozoan (single-cell) parasitic organism *Plasmodium*, propagated by the female *Anopheles* mosquito (the 'vector')—seems highly plausible in most cases but not necessarily certain in all. The records used to determine this are obscured by the theoretical position with which contemporary medicine understood the cause.[8] The answer, then, to the question is both 'yes, certainly' to the old understanding of the disease and 'yes, probably' to our current understanding. This book is principally interested in the first reply, as herein lay the observations, opinions, and responses that shaped the outcomes which significantly contributed to the physical development of 1840s Hong Kong. In other words, this account focuses upon the *built environment* of the early colony and how perceptions shaped reality. Arthur Starling has attempted to do what this book has not—to diagnose, from a modern medical standpoint, the disease behind the 'Hongkong Fever'. Yet he too has concluded that 'it is not certain from the available accounts of Hong Kong fever, whether it was one disease or several . . . but most certainly, malaria would have been at least the most important of those diseases'.[9]

Causes and effects, however, are not quite so straightforward. Some historians of medicine, such as Randall M. Packard, have asserted that epidemics of malaria and their patterns of transmission have, in the past, arisen from dramatic shifts within an environment. Often, these result from complex human factors, making predicting malarial outbreaks difficult while also accounting for its opportunism and resilience. Packard argues that three essential ingredients are needed for an epidemic to occur: the local

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presence of malaria-transmitting mosquitoes; an environmental change that favours the breeding of these mosquitoes, essentially changes which disrupt the original flow and distribution of water; and the introduction of a new, large human population, particularly one comprising of malaria carriers or 'immunologically naïve' individuals.[10] Early colonial Hong Kong provided all three of these factors, making the argument for malaria particularly convincing. Settlers began the disruption by constructing the main coastal carriageway, the Queen's Road, blocking nullahs (streams), churning up earth, and thereby providing numerous pockets of stagnant water for mosquitoes to breed in, increasing the problem through widespread pits created from the excavation of land for construction. Contrary to previous historical accounts, it seems from military statistics that malaria was unwittingly *brought* to the island by sick troops of the British armed forces, the healthier members of whom proved both 'immunologically naïve' and therefore particularly susceptible to the first attacks across the years 1841 and 1842. As the colonial medical historian Mark Harrison asserts, 'War favours the spread of malaria in several ways. The movement of large numbers of troops and civilians introduces parasites and vectors into areas formerly free of them; the destruction of dams and levees cause low-lying areas to be flooded, providing ideal breeding grounds for mosquitoes.'[11] Due to both rampant city-building and the settlement as a military depot for sick soldiers, by early 1843, the disease had infected a critical mass of people. This number all but ensured the city-wide epidemic that would take place later that year. But, as this book will chart, indeterminacy as to the sources of malaria or 'marsh miasma'—this mysterious agency of fevers, diarrhoea, and dysentery—lent, by its very elusiveness to ascribable causes, certain pliability to political manipulation by special interest groups and personal agendas.

Miasmata, as a sickening force arising from a natural landscape, though first extending back as a recorded idea to Hippocrates (460–377 BCE), had also more recently captured the imagination of the Romantic Movement in quite a significant way. It could show the hand of God at work in the humbling of arrogant humanity in the quest to conquer and control nature. It could also play into the hands of a growing lobby of protesters writing in the early nineteenth century about the inherent dangers of the British military forces enduring tropical climates in which the European constitution was irreconcilably ill-suited. Francis Danby's painting *The Upas, or Poison-Tree, in the Island of Java*, is a startling example of the emotional and religious impact of exotic 'miasmatical' tropics on the minds of the early nineteenth-century British (**fig. 1.2**).

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Fig. 1.2. F. Danby, *The Upas, or Poison Tree, in the Island of Java*, ca. 1820. Oil on canvas. © The Victoria and Albert Museum, London.

Danby's preferred subject matter was of an apocalyptic and biblical kind. Painted in 1819 and exhibited in London in 1820, it won his election into the Royal Academy. The 'tree', a single thin spike, protrudes from an utterly desolate landscape, the surface sickened by its toxic presence. Bodies are strewn in the right foreground with the last, grief-stricken survivor (evidently a pale European) trapped yet futilely attempting to shield himself from its malignancy. This painting gripped the British imagination and, contrary to what might be supposed, it was not seen as an allegory. The tree, or at least the deadly landscape of Java, was actually thought to exist. The London *Literary Gazette*, reprinted locally for Hong Kong's nervous readers in December 1846, would record, twenty-six years after Danby's painting, an incredibly similar description of a supposed real environment.

> THE VALLEY OF DEATH. The following is a probable explanation of the origin of the upas tree story: 'A real valley of death exists in Java; it is termed the Valley of

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> Poison and is filled to a considerable height with carbonic acid gas, which is exhaled from crevices in the ground. If a man or any animal enter it, he cannot return; and he is not sensible of his danger until he feels himself sinking under the poisonous influence of the atmosphere which surrounds him. . . . Birds which fly into this atmosphere drop down dead; and a living fowl thrown into it dies before it reaches the bottom, which is strewed with the carcasses of various animals that have perished in the deleterious gas.'[12]

Hong Kong Island may not have seemed similarly marked out as a place of death. At least, not at first. But following their occupation in 1841, this would quickly change for the new colonists. Soon, after successive years of repeated outbreaks of malaria upon barracked troops, military cartographers were violently inscribing on surveys the positions of ridges and furrows upon and against which they built—the furrows increasingly recognised as locations of miasma, the ridges acting as barriers to wholesome ventilation (**fig. 1.3**). Such ventilation-craft in the analysis of topography was essential to military security and troop survival. This government map was drawn just as the Hongkong Fever abated. And if the graphic violence was not clear enough, the military draughtsman added, 'The land rises abruptly from the North Shore, in steep ridges and deep ravines—terminating in a lofty ridge extending from East to West. . . . The shaded portion shews the formation of the land in the Military Cantonment.'[13]

One may say that this book is partly a study in 'medical topography'. This branch of medicine came into its own in the early nineteenth century in British India, as developed by the Presidency Surgeon of Bengal Sir James Ranald Martin in his influential work *Notes on the Medical Topography of Calcutta* published in 1837. It was, as it sounded, the mapping and surveying of geographical terrain under the belief that certain areas possessed an inherent, malignant effect upon human health. Like Montesquieu before him, Martin believed that our environment and climate directly affected our communal character and, consequently, the nature of our political institutions.[14] This belief of climate and terrain effects was compelling during the centuries of European expansion and global colonisation, from the seventeenth to the nineteenth centuries. As David Arnold writes, prior to the nineteenth century, data was presented 'in the form of narratives, describing the epidemics that had afflicted a territory over a period of years, especially in relation to climate and seasons, but with only an impressionistic notion of the numbers and type of fatalities that had occurred'.[15]

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During the 1820s to 1840s, a change occurred in mapping disease, emphasising statistical forms of measurement and, therefore, generating the illusion of diagnostic accuracy upon an indeterminate phenomenon. Gone, too, were the shaded hatchings of ridges and furrows of hillsides and mountains, their emotional charge dissipated by the flattened empiricism of contour lines. The first of these contoured surveys to be published of a sovereign territory, we will find, was of Hong Kong Island. 'The general effect', Arnold writes, 'as far as the early nineteenth century was concerned was to give a statistical and scientific specificity to the hitherto generalised dangers of tropical climates and to encourage measures to combat them'.[16]

'Systematic bedside observation' and the 'statistical analysis of cases' became a hallmark of the British East India Company's 'experimental and empirical' medical approach within their eighteenth-century hospitals in India.[17] The high number of military casualties, particularly through disease, afforded test subjects for British surgeons and doctors working in tropical environments. This allowed them the opportunity to innovate, for instance, with economic mass remedies, and to theorise.[18] The medical attendants of the troops stationed in early Hong Kong could be said to be disciples of this distinctly 'tropical' school of thought. Arnold alludes to a parallel development—the use of medical geographical and topographical surveys (that is, the inclusion of *height* measurement and landscape features), 'giving expression to perceptions of the particular local causes of disease through the impact of climate, vegetation and physical topography'.[19] These were the reinforcing tools of adventurers within the tropics brought up on a diet of Montesquieu, Hume, and Falconer, sharing their beliefs about the effects upon the human and natural worlds through the exertions of climate and geography.[20] As will be shown, statistics and topographical surveying played a crucial role in the medical mapping of Hong Kong and consequently influenced the decision-making of the civil and military wings of government in planning and building the colony.

▸ **Fig. 1.3.** Surveyor General's Dept., 'Plan of Victoria, Hong Kong', with Cantonment Hill (now Admiralty) (detail), 12 May 1845. Ink and watercolour. © The National Archives, Kew (WO 78/479).

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Urbanisation and Its Discontents

Malaria is not an exclusively tropical disease. But it was thought by European colonists as a malignant emergent property of tropical peoples, climate, and context, and so, easily framed as such. Contemporaries considered its mode as environmental rather than parasitic. Therefore, as perceived by western medics of the time, the pathogenesis of most diseases was intensely spatial. Physicians, not architects or planners, became, as Michel Foucault puts it, 'the first managers of collective space'.[21] Developments in medical theory profoundly affected the perception and shaping of the built environment and cities by the early nineteenth century, especially within tropical colonies. Foucault identified four lenses through which European doctors viewed the transmission of diseases. The first was by combining local conditions and seasonal variations (regional climate, geology, humidity). The second was either between human and human (densities of populations and classes of people); between humans and natural substances (through sewage, gases, water); between humans and animals (stables and abattoirs); or between the living and the dead (cemeteries). The third was related to where one resided (buildings, foundations, ventilation). And the fourth concerned human displacement (migration, movement of soldiers, disease propagation).[22] This book shows that all these factors in synthesis played a fundamental role in the initial settlement, perceptions of the epidemic, and subsequent reactions and development of Hong Kong. This work, then, is principally an architectural, urban, and landscape history of the colony, as affected by medical inquiry, military- and civil-settler sentiment, and their combinative political consequences.

Since my earlier work on this subject, scholars have made new inroads that have connected and widened the research fields of architecture, urbanism, landscape, and colonialism, with a heightened degree of spatial and material understanding.[23] Though this book may be considered a monograph across a tight historical timeframe, it is important to consider the broader themes through which these events may be viewed. For instance, as Jiat-Hwee Chang has exposed, the metrics and discourse which bind the term 'tropical architecture' and its genealogy—a term which he has extended back from the mid-twentieth century and into the nineteenth—does not equally frame its antithesis, 'temperate architecture', revealing asymmetric power relations between the west and non-west.[24] There was no such category as temperate architecture because it meant western architecture. Rather this term was replaced by finer-grained cultural, stylistic, and national

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categories (such as English Baroque, French Neoclassicism, and Italian Mannerism). Tropical architecture, on the other hand, was approached by western contemporaries without such distinctive niceties. Instead, stripped of any cultural and historical attributes, considered autochthonous, its form and applications were thought entirely responsive to external factors rather than the artistic choices of local builders. By extension of prejudice, those local builders were thought to lack the sophistication to produce works of genuine architecture; they were merely reactive. And so, Hong Kong's 'infancy' (as several contemporaries termed it) was saddled with the inability to fashion itself into a respectable city as it lurched from crisis to crisis, with malaria playing a symbolic and amplified role in the futility of planning and constructing the beleaguered colony. It may have been the environmental inadequacy of an indigenous 'mat-shed' as an army barracks, or the misalignment of windows on a 'knock-off' of a classical façade for a public official's residence, or the damp walls of a hastily constructed speculative development, all examples we will encounter. Nevertheless, whether by form or through practice, all sat under the same condemnatory rubric of inescapably 'tropical' architecture or architecture devoid of culture. To be forced to build reactively implied that one could not plan to civilise.

Irrespective of the overt racism, such condemnation of early Hong Kong architecture by European visitors to the colony attempted to conceal obvious hypocrisy. The mat-shed, the godown (or warehouse), and the market shophouse were non-descript precisely as intended by the western client as they were also products of craft by the Chinese builder. Modern imperialism and its economic logic, as exercised within frontier territories, demanded that the bulk of its architecture conform to simple templates, easily reproducible buildings, to a 'grey architecture' as G. A. Bremner defines it.[25] Hong Kong's early architectural assemblage was necessary to knit it quickly and more efficiently into wider networks of commerce and militarism, allowing its facilities to adapt as needed to shifting and unforeseen demands and risks. As Bremner later describes in his study on Jardine Matheson & Co., this grey architecture must be considered a kind of 'facilities infrastructure', recognisable and standardised to generate a familiarity of use by its transient patrons and confidence in its extendibility.[26] It also aligned with the forming of facilities enclaves, a peculiar urban phenomenon of early military and commercial life upon the island.

As of going to print, Cole Roskam is close to completing a remarkably ambitious study of the urban and architectural history of Hong Kong, spanning from the 1840s to the present day. Presently entitled *Hong Kong: Uncertain City*, it extends and amplifies

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the thesis that crisis and precarity, rather than retardants, were essential, propulsive forces that continually shaped the city of Hong Kong across its nearly two centuries of urban development. The book examines the evolving environment within which Hong Kong's architecture played a dynamically participatory role. Historians and critics have often argued that the territory's urban language contributed to a derived city, absorbing and replicating aspects and appearances of both east and west. Instead, the research determines how, because of Hong Kong's unique conditions, the built environment responded, often in blunt terms, as a legible critique of its particular relations to such generative crises and that we must examine its architectural history from the ground up.[27]

Before the city, with all its uncertainties, could gain a foothold on the island, colonists had to establish its legitimacy. Maxime Decaudin, a historian of landscape, has recently explored in his doctoral work how the as-found 'barrenness' of the island had first to be agreed upon as an accepted environmental discourse to justify colonisation, both in terms of the rights to urbanise and to distinguish the British as good stewards compared to the indigenous population. As Robert Peckham has observed earlier, in botanical literature, Europeans initially regarded Hong Kong as a 'fallen world'. In these colonial narratives, a tense ambiguity arose of inherent degradation of the island's geology, on the one hand, against those claiming human causes: that it had been the 'reckless' indigenous population who had stripped life-saving vegetative cover from the mountainside surface. Subsequently, colonists could blame native inhabitants for malaria and justify European preeminence once they could formulate a connection between vegetation and miasma, yet protection by tree cover.[28] It helped that extended urbanisation forced some indigenous people out of their cultivated lands to cut down and sell vegetation from nearby hills, merely reinforcing such a narrative. In contrast, schemes for (re)afforestation would portray colonial good governance.[29] Moreover, by playing upon the claims that careful modern management of the island's 'natural' landscape had devolved into the capable hands of colonists, officials could simultaneously justify the expansionary tactics of urban development with island-wide tree planting as a combined project.

An interwoven understanding of landscapes, cities, and sickness, provoked by the global pandemic, has been explored in a spate of recent studies, amplifying modern urbanism's malignant relationship with contagious diseases and their propagation. Such studies include, by way of example, Mohammad Gharipour and Caitlin DeClercq's edited volume *Epidemic Urbanism* (2021). Thirty-six geographically divergent historical

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accounts serve to remind the reader that the communication of disease across modern history reveals the vulnerable extent of a city's globality as well as its social inequalities.[30] Sara Jensen Carr's work, *The Topography of Wellness* (2021), focuses upon how architects, landscape designers, and urban planners responded to disease outbreaks across America's urban landscape, in turn producing unexpected consequences.[31] Nida Rehman's doctoral work at the University of Cambridge, 'Epidemiological Landscapes' (2020), demonstrates how urbanism and its politics persists in shaping the landscape of mosquito-borne epidemic diseases.[32] Though miasmas have long been discounted as a mode of malaria transmission, a mid-nineteenth-century physician in Hong Kong could be just as attuned and responsive to the variety of urban factors contributing to the disease as a modern epidemiologist is in postcolonial Lahore. Insect-to-human-spreading epidemic diseases are shaped by the physical, economic, political, and social geographies that bind both species together. If anything, the topographical tropes of ditches, waterways, and damp soils from pre-bacteriological medicine became sharpened loci of eradication once the insect vector and its breeding grounds were identified.[33]

Epidemiology and urbanism have grown significantly through recent Hong Kong historical studies, especially concerning the plague epidemic at the end of the century. As just one example, Cecilia L. Chu's detailed work on late-nineteenth- and early-twentieth-century housing speculation and its relations to disease (among other aspects) highlight the connection between the colony's first urban renewal project at Tai Ping Shan and the 1894 bubonic plague.[34] In her recent book, Chu amplifies the precarity and class manufacture of such urbanism and its amplification of a transient pathology of the colony. This structure is made apparent by the contradictory logic of a colonial-sanctioned 'speculative landscape', one in which Chinese investment is both encouraged yet kept segregated within Hong Kong's geographically stratified property market.[35]

In uncanny anticipation of the Covid pandemic, *Contagious Cities*, a 2019 Hong Kong art and heritage exhibition at Tai Kwun Contemporary (at the old prison site) and supported by the Wellcome Trust, explored Hong Kong's long relationship with pandemics and how they have significantly shaped the city's development physically, socially, and culturally.[36] Artworks evoked the complex psychological and trepidatious urban daily existence living through an epidemic.

Nevertheless, despite renewed and remarkable interest in the subject, surprisingly little has been added to Hong Kong's establishment history and its founding epidemic

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story of urban transformation across the early 1840s. One exception is Ria Sinha's *longue durée* essay study of malaria across Hong Kong's entire colonial history. 'Fatal Island' (2018) demonstrates the disease's outsized importance in the most significant episodes of the colony's growth.[37] Though briefly touching upon the early period, Sinha emphasises the enigmatic quality of malaria through the nineteenth century and how speculations as to the source of its emanations continued to provide an underlying fear as the city grew in numbers and extent. The *Hongkong Fever* was as much a convenient label of concealment as it was of identification. It could address the symptoms while absorbing the ambiguous cause, allowing other diseases exhibiting similar symptoms to be confounded with it. This uncertainty as to source led to landscape-altering projects which, though intended to dissipate the city's chief malady, merely refuelled it. Perhaps the most significant example was the expansive afforestation programme of the 1870s. Here, the concealing of the island's barren granite rock, long considered a potential source of the disease, was replaced with abundant vegetation and shade for many more mosquitoes to breed within.[38]

Every doctor had his theory as to malaria's source, from atmospheric disturbances through electrical storms to stagnant pools of water. But it was 'ground miasma', the fear of gases rising from disturbed soil or broken rock, that most influenced the first urban development of the city of Hong Kong since it was the most ambiguous and least understood of the various medical hypotheses. It is hard to imagine now, but each stage in Hong Kong's early city growth was accompanied by uncertainty and hesitancy as to whether that step would trigger another outbreak. It was a fearful factor of urban change that only in the last century or so we can comfortably dismiss.

Hongkongraphia

Much of the material used for this study comprises primary sources. Textually these include contemporary sources such as local and central government records, medical reports, personal diaries, published newspaper and journal accounts, advertisements, and the like. Visual materials play an intrinsic role, revealing settlers' ideological, perceptual, and even psycho-spatial anxieties. These materials consist of military and naval surveys, maps, prints, personal sketches, trade paintings, and construction drawings. This forensic approach has been taken because scant research exists regarding the founding period of Hong Kong's colonial

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development concerning the physical growth pattern of the city of Victoria—the name given to the urban settlement stretching along the northern shore facing the peninsular of Kowloon. Of course, many secondary sources have played a guiding or contextualising role in shaping this book, though I shall discuss only a pertinent few.

My initial investigations as an architectural historian were focused, rather obviously, on those agents who built the colony: on military engineers, private speculators, government contractors, and Chinese builders. John Weiler's unpublished doctoral thesis on the Royal Engineers as 'army architects' serving Britain's global imperial enterprise was especially formative.[39] However, during my early research, I chanced upon the transcript of an 1845 medical lecture given by Hong Kong Colonial Surgeon Dr. Francis Dill, suggesting that there were strong views within the medical fraternity of the time as to *safe* and *unsafe* forms and methods of building.[40] His lecture at a meeting of the first medical society to be formed on the island, the China Medico Chirurgical Society, recounted the terrible years suffered by all in Hong Kong during 1843 and 1844. Hong Kong had undergone the trauma of repeated attacks of 'miasmatic vapour', sometimes also called 'malaria'.[41] He made a critical connection between poor construction and sickness, and implied that better dwellings could mitigate against the harmful effect of the 'rays of the sun, sleeping under the direct rays of the moon, and the exposure to the night dews'.[42] Health issues, particularly of what was understood to be malaria, began to take on a central organising role in my research (and a life of its own), tying together various processes of urban and architectural development. It linked almost every aspect of material culture in the story of the colony's establishment: a mapping of the island, the means of construction, governance and taxation, and even the habits and views of the European and Chinese inhabitants.

For written documentation related to governmental correspondence, I principally concentrate upon the British Colonial Office (CO) and War Office (WO) and, to a lesser degree, Admiralty (ADM) and Foreign Office (FO) papers, the originals of which now reside at The National Archives at Kew. Counterpart copies and many local government papers in Hong Kong have been lost or destroyed during WWII. These include colonial dispatches and internal memos, government reports, legislative records, and official ordinances. The second primary source of written documentation has been local newspapers, in forms such as articles, contemporary advertisements, and foreign news extracts. This 'public' medium has proved an essential foil for government correspondence, often triangulating shared events and offering differing reactions and approaches to official

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pronouncements. Documentary evidence from some quarters has, understandably, been fragmentary. For instance, it took a while for Hong Kong to standardise its reporting on economic matters. In addition, funding sources shifted after the ratification of the Treaty of Nanking (Nanjing) in late 1842, from the 'military chest' to voted sums from parliament. This shift had a profound effect upon government expenditure, changing the relations of power and, therefore, physical influence between the military and civilian wings of government upon shaping the island colony. It would take a few more years for the civil administration of Hong Kong to become financially self-supporting and, with this, begin to enjoy greater freedom and speed in investment upon its public works. Eventually, there would be no need for delay in waiting for approval from London or the crafting of tortuous local government justifications.

There is evidence from newspaper sources that the daguerreotype (an early photographic technique) was in use in Hong Kong from the early 1840s.[43] However, no photographs seem to exist depicting Hong Kong until the late 1850s and are therefore unable to support this period of investigation. For drawn sources, I have relied entirely upon hand-produced documents: maps, land surveys, and architectural drawings, principally from The National Archives at Kew, London, and China Trade paintings from several repositories and directions, but most especially from the Hong Kong Museum of Art, Hong Kong, and the Peabody Essex Museum at Salem, Massachusetts.

In addition, the present research draws across five other archival repositories. Within Hong Kong, the University of Hong Kong's 'Special Collections' (particularly the Morrison Collection's original newspapers such as the *Canton Register*) and its extensive microfilm and microfiche collections are of considerable importance, as, of course, is the Hong Kong SAR government's Public Records Office (HKPRO). In London, the British Library has supplied my research with a range of nineteenth-century publications, such as the *Professional Papers* of the Royal Engineers, while the stuffed shelves of the Royal Institute of British Architects (RIBA) Library brim with such specialist architectural British journals as *The Builder* from the period of the 1840s, offering insightful early Victorian commentary on British and British colonial matters related to the built environment. The library of the Corps of the Royal Engineers adjacent to their museum and barracks at Chatham, Kent, have provided me with a wealth of further published and unpublished materials on their significant constructions across the island. Meanwhile, the substantial Jardine Matheson Archives at The Department of Manuscripts and University Archives,

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Cambridge University Library has shed valuable light on the complex desires and fears of an elite merchant house deliberating whether to invest in or abandon Hong Kong.

In addition to these primary sources, other documents need to be briefly acknowledged. First, one must mention the charming and informative set of letters at the HKPRO by the cartographer Lieutenant Thomas Bernard Collinson of the Royal Engineers to his parents and sister in Gateshead, northern England. The young Collinson has emerged as one of the central figures in the story of the construction of colonial Hong Kong.[44] Also valuable have been the richly illustrated diaries of Edward Cree, a surgeon of the Royal Navy and a future deputy inspector-general of hospitals and fleets, now kept at the Caird Library and Archive, National Maritime Museum (NMM), Greenwich, London. Cree, like Collinson, was in his twenties when he visited Hong Kong. But he acquired a different perspective to his friend Collinson due to the spread pattern of his visits. The latter remained in Hong Kong for about three years (1843 to 1846), while the former, as was the norm with naval personnel, made repeated forays to the island over an extended period, beginning at its inception as a British settlement in 1841.[45]

It would be useful to provide an outline of the various contemporary Hong Kong–based (and Macau-based) newspapers and their political allegiances to familiarise the reader with the complex terrain of relative bias among the colonial broadsheets of the time. When one considers the limited readership available, Hong Kong was blessed with a surprisingly large number of newspapers, albeit all in English. Literate Chinese would have to wait until 1853 for the monthly periodical the *Xia'er guanzhen* (*The Chinese Serial*), a journal published by the London Missionary Society.[46] Meanwhile, the only Chinese-language notices in circulation across the 1840s concerned government pronouncements and shipping advertisements, often carried by the English press. Otherwise, all communications by the colonial government to the Chinese population were via intermediary officials and police, community leaders, compradors, and through hastily pasted bill stickers (wall notices), the latter as depicted by the artist Edward Ashworth in one of his recently discovered watercolour views of Hong Kong in 1844 (see **fig. 4.4**).[47] This voracious English reading culture, together with its linguistic hegemony, most certainly originated in Calcutta as earlier carried into Macau via the major trading houses or foreign 'hongs'. Calcutta was, after all, 'a city with a very vigorous printing industry'.[48] No less than five English-language newspapers were in circulation during the years 1841 to 1848 within Hong Kong, though not all were in existence at the same time.[49] The *Canton*

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Press and the *Canton Register* were the earliest, and in 1841 both had forsaken Canton (Guangzhou) and were operating from the relative safety of Macau. The *Canton Register* was run by John Slade and owned by James Matheson, then head of the principal hong on the island, Jardine Matheson, and may be seen as a mouthpiece of mercantile interests. However, it appears to be the case that Matheson did not involve himself very much in influencing the opinions of his editor. The *Register* relocated to Hong Kong in 1843, changing its name to the *Hongkong Register*. The *Canton Press* remained in Macau, eventually folding in March 1844. The short-lived *Hongkong Eastern Globe* ran for just a few months in 1843, and we know very little about it.

In the meantime, the *Hongkong Gazette*, the colony's short-lived government newspaper, was established in May 1841, just in time for the first land sales. The new *Friend of China* soon joined it, and both quickly merged to become the *Friend of China and Hongkong Gazette*. This newspaper moved its operations from Macau to Hong Kong in 1842, becoming the first newspaper established on the island. Following a transfer of editorship to John Carr in early 1844, it shifted its attack towards the government and subsequently lost its gazetted status. It would become the Hong Kong government's most vicious critic. The new 'organ of government' (a derogatory term much used at the time) was briefly held by the *Hongkong Register* only to be forfeited once again and won by a new newspaper, the *China Mail*, in early 1845. Edited by Andrew Shortrede, the *China Mail* remained relatively subdued in tone towards the local government than its incendiary contemporaries and outlasted its competitors by several decades. Its survival contradicted a generally held opinion that having government backing was the kiss of death to a newspaper's longevity and the amassing of a popular readership. Apart from the *Eastern Globe*, with no archival copies in existence, this book weaves across all four newspapers starting from early 1841 and attempts to reflect the spectrum of divergent opinions surrounding colonial Hong Kong's city formation.

The historiography of Hong Kong is a small but concentrated field. Along the way, I have read my Tarrant, Eitel, Sayer, and Endacott, and of recent vintage, my Smith, Sinn, Chan, Welsh, Tsai, Munn, and Carroll, to name some of the more significant historians to address this early period.[50] Tarrant, the only eyewitness in this group, wrote the first 'history' of the colony. Well, not quite. An earlier account of the settlement comes from Lieutenant John Ouchterlony of the Madras Engineers and the island's first chief military builder. Yet, despite his significant role, the only image we have of Hong Kong in his

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Fig. 1.4. Lt. J. Ouchterlony, 'Hong Kong' (frontispiece), *The Chinese War, London*, 1844.

1844 memoir on the First Anglo-Chinese War—though considered significant enough to grace it as a frontispiece—is a naïvely drawn and liberally scaled attempt to depict the locations of major constructed works across the settlement (**fig. 1.4**). It is as if he had not even visited the place let alone helped to build it. The mast and outsized flag of the harbour master are wrongly placed above the magistrate's prison, godowns (warehouses) are imprecisely oriented, and cartoonish houses are constructed with insufficient scaffolding. It suggests that Ouchterlony saw the colony in figurative terms, more of a process than a place, as a drama rather than a destination.[51]

Considering his tour of duty, Ouchterlony's account of the development of Hong Kong in his war memoir is surprisingly slim yet characterised by the giddiness of rapid development across the first year of colonisation.[52] At the other end of the spectrum regarding type and time, three works of fiction, historical novels, have tapped into this same disorientation—of Hong Kong as a process. These works, each in their turn, have vividly conveyed the dizzyingly rapid and raw growth of the city that must have been experienced by settlers, priming the imagination of modern readers for almost the last sixty years. The first novel is the now-familiar narrative of James Clavell's classic work

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Tai-Pan (1966), which in the mid-1960s introduced readers to the turbulent world of colonial politics and the opium trade on the 1840s South China coast.[53] It is a thinly-veiled, romanticised account of the actual British mercantile house of Jardine Matheson & Co. and James Matheson's (Dirk Struan's) early ambitions to gain a foothold in Hong Kong during the initial stages of colonial settlement. It is one of the first fictional works to attempt anything like a cohesive portrayal of the landscape of Hong Kong as the city and colony rapidly emerged, and numerous parts of the island are used as backdrops to the storyline, particularly Happy Valley and East Point. Clavell, though, is often more interested in dialogue than description.

The second work, published precisely two decades later, is by the Anglo-Chinese author Timothy Mo and entitled *An Insular Possession* (1986). With a somewhat more sophisticated descriptive approach, Mo relies on primary research, much from newspaper sources, interspersing these within the dialogue as article cuttings under fictitious newspaper titles. He also provides the reader with a sense of the shock of first settling in Hong Kong and the rapid pace of development.

> Gideon gapes. He had expected the beautiful anchorage of Hong Kong again, of course. But the extent of development on shore is extraordinary. He was prepared for nothing more than the 'jumble of wild ravines' and a desert shore, with perhaps a handful of tents and a few sailors and Chinese. Yet this is like strolling through a large fair in some populous town. Where he and Walter walk, on a foreshore extended by wholesale flattening of the hillocks and rocks above the beach, they mix in a crowd of sailors in best white ducks, Irish soldiers in red, coolies, hucksters, fishermen, lascars, mountebanks, laundry-girls, fruit-sellers, boothmen, and barbers. The square of Canton was nothing to this. Like white pepper-pots to the East are the tents of the military lines, but these are outnumbered now by the ugly mat-shed constructions: wooden huts some 100 feet long, with chinks in the walls crudely plastered in mud, or often not at all, and rude grass-weave roofs. They can glimpse through the crowds the men lying on their palliasses inside or smoking while they clean their accoutrements.[54]

This evocative and realistic depiction of life onshore during the first months of 1841 appears as if it belonged in the diary of naval surgeon Edward Cree, as captured in his rough, on-the-spot watercolours of that year (see **fig. 2.8**). Although, as will be seen, the harsh and uncertain reality of the early colony was even more frightening than Mo paints in his work of historical fiction.

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Amitav Ghosh provides the third, most recent fictional narrative to continue the trope of Hong Kong as a barren, sickly, and forlorn island suddenly transformed into a goldrush town of colonial opportunity. Among the final portions of his last book in the *Ibis* trilogy on the India–China opium trade, *Flood of Fire* (2015), he describes

> Soon some of the new arrivals began to move ashore, building huts and shacks, settling where they could. The beach where Paulette's daily climb began did not long remain deserted. A shack appeared at its far edge one day and within a week a hamlet seemed to have sprouted around it.
>
> . . . For centuries Red Incense Burner Hill [Hong Kong] had been considered a place of misery and misfortune—insalubrious, racked by disease and lashed by devastating typhoons. In the past, mainland people had gone to great lengths to avoid Hong Kong; the inhabitants had been objects of pity because they were condemned to eke out an existence on a barren, ill-starred island.
>
> Now suddenly it was as if the island had been transformed into a lodestar. The old-time islanders had begun to fear that their land, their homes, would be expropriated by the British.[55]

Ghosh implies plausibly that the First Opium War (1839–1842), a war run by merchants that brought about the possession of Hong Kong, was managed through bribery and corruption of the British army and navy. Land was always the focus. The military protected traders' interests, ensuring that the choicest plots went to the leading British hongs, while installing a trade-friendly local civil administration to oversee the process.

Speaking of land, among the many secondary sources on the early colony relied upon, the present author owes a particular debt of gratitude to the late Professor Dafydd Emrys Evans. He stands out in his attempts to produce a connective narrative, piecing together the earliest physical events in the formation of the settlement and linking these events in a causal sequence. Evans was founding Dean of the Faculty of Law at The University of Hong Kong, teaching there from the late 1960s to the 1980s. He had ambitions to produce a thorough study of land administration, the leasing and conveyancing of land in the 1840s as a mechanism to investigate the politics and conflicts of the first inhabitants. Sadly, such an ambition was never fully realised. However, he did produce several fascinating studies. These vignettes include 'Hong Kong's First Government House' (1968), an attempt to pinpoint the location of the governor's first 'bungalow' residence from a

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confusing and conflicting array of primary and historiographical material;[56] 'Chinatown in Hong Kong: The Beginnings of Taipingshan' (1970), demonstrating the chain of events in the renting of land before and following the ratification of the Treaty of Nanking and how this propagated the forced eviction and resettlement of the Chinese inhabitants within the small city;[57] also, 'Jardine, Matheson & Company's First Site in Hong Kong' (1968), which correctly argued that the foremost British hong first established its commercial interests within the area now called 'Admiralty' alongside the future 'Central' district and not yet at East Point, and by inference was a significant catalyst in that location.[58]

However, it is a lengthier paper entitled 'The Foundations of Hong Kong: A Chapter of Accidents' (1975), which proved to be Evans's most important piece of scholarship in the genesis story of colonial Hong Kong.[59] His underlying thesis was that the history of these first years could be divided into three sections: Hong Kong under Captain Charles Elliot's brief administration (1841), under Sir Henry Pottinger before the ratification of the Treaty of Nanking, and therefore before confirmation of crown sovereignty of the island (1841–1843), and events after 1843. From the first surge of opportunism and haphazard land-grabbing (1841) to inadequate governance amidst an uncertain future (1841–1843) to a state of inability by the government to adapt to changing commercial pressure following this, Evans argues that the government seemed consistently out of step with both individual commercial interests and, conversely, with the reining in of these interests collectively for the sake of a coherent urban plan for the city. It was, quite simply, a wasted opportunity. The present book builds upon this tactic and content. Yet, when one adds to this political stew an alarming uncertainty as to one's very survival; a Russian roulette of land selection based upon uncertain notions of the relative locations of healthiness; the equally uncertain suppositions as to why one year should prove more fatal than the preceding or succeeding; and the various theories of miasma prevailing upon residents; then it makes it, perhaps, less surprising that the colony stumbled so blindly in the attempt to find an equitable balance between these various interest groups.

Synopsis

Complexities arising from the interdisciplinary nature of the study have suggested that the simplest solution is to position each chapter chronologically. Nevertheless, making

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one's life simpler is not the driving force behind this chronological approach. It is an essential argument of the book that the year-by-year unfolding of events within the new island colony was a relentless educational process for the inhabitants. Malaria is presented as a harsh teacher, repeatedly thrusting itself upon the community and causing society to progress on several fronts: physically, politically, and socially. In addition, this account is as much about the *building* of the island city of Hong Kong itself as it is about the perceptions of malaria and the concerns of well-being that generated it. Conversely, the word 'construction' in the title must be seen to represent not just the physical making of the city but also its communal imaginary and conceptual formation. Therefore, with the reader's indulgence, the lens will move at times off medical and onto urban analysis, essentially a transition from *malaria* into *making*, hoping that both can be seen to influence each other within the broader context.

Chapter Two explores the development of Hong Kong after its unofficial declaration as a British colony in late January 1841. This includes the subsequent two years of rampant development upon the northern shore of the island, up to the initial signing of the Treaty of Nanking. A driving argument is that the first, crude steps towards shaping a habitable environment were largely imported: the know-how, the labour force, the materials, and even the very disease of which the island would, unfairly, be attributed as initially generating.

Chapter Three concentrates upon 1843—the year of triumphant, permanent possession by the British Crown and the year of the worst outbreak of fever the colonial island settlement had yet suffered. Through the trauma of the experience, a forensic concern for topography determined the future decisions of all elite sections of the colonial community: the military, the merchants, and the government. Military officers and civilians tested a set of approaches as to how and where to build, frustrating the government's ambitions for a linear, mercantile waterfront and the proposed move of the city's centre eastwards.

Chapters Four and Five may be seen as a couplet—encompassing four distinct yet interrelated themes—in examining the three years following 1843 and the story of a city and island colony's determination to rebuild and expand. Brenda Yeoh asserts that often for colonial histories 'the tendency is to emphasise the influence of the colonising culture in space-making processes at the expense of the colonised, who usually remain as locally abundant but faceless units of labour ministering to the coloniser's

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needs'.[60] Despite the paucity of material to thwart this tendency, the concern has been taken to heart. Chapter Four, an account of labour relations in the building of Hong Kong, focuses upon the Chinese workforce that constructed the colony and the British employers that commissioned them. It is a chapter on human management skills, or perhaps a lack. While the voices of the Chinese remain largely mute within much of these early sources, in a subaltern sense, their actions speak volubly. The second section focuses on inter-governmental problems within Governor Davis's administration. It recounts his desperate desire to collaborate with military engineers to help provide much-needed roads, drains, and sewers—the very nervous system of the city and a perceived lifeline to prolonged health.

Chapter Five also looks at the aftermath of 1843 but from a more ideological perspective. It commences with an individual's peculiar assault on the very existence of the colony of Hong Kong and an attempt to revive past fears of malaria as a political means of retaining an altogether different island on the China coast. This assault would backfire, leading to some sort of consensus that malaria was now a controllable issue. The second section looks at two extremely divergent building typologies along the spectrum of health: the mat-shed (a shed form made of woven bamboo and leaf matting) and the mercantile palace, and how the transition from one to the other not only generated a city but a new *lifestyle* and, therefore, a set of class distinctions for European residents. Contestations between Europeans and Chinese imprinted themselves physically upon Hong Kong's urban fabric. From the beginning, there was a complex dialogue between indigenous vernacular and European modes of building together with an intense dependence upon the local mat-shed for multi-purpose uses. The adoption of vernacular construction techniques together with locally sourced materials, such as granite, will be shown to permeate this story.

Finally, by way of tying up, Chapter Six illustrates, through an event as a case study, the painful education process that colonial Hong Kong had undergone and, by 1849, considered it had escaped. A small yet virulent outbreak of fever occurring in the most complete and prestigious military buildings yet constructed upon the island, the Murray Barracks, caused an entire military administration to re-question their previously accepted wisdom about topographical context and construction. By this point, military doctors could keep precise track of a patient's location within the barracks complex, through careful record-keeping. Such ease of data-gathering would reveal the strides made in

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developing protocols and procedures—acquired through wider imperial experimentation—demonstrating how far the Hong Kong military had travelled in diagnosing and remedying the effects of malaria over the course of nine years.

The title of this book, 'Form Follows Fever', might amuse those with an interest in modernist architecture and Louis Sullivan, but it has not been chosen in jest or inappropriately.[61] The word 'form' is employed in its broadest sense. Malaria will be shown, quite clearly and in no uncertain terms, to have directly shaped the future course of Hong Kong's urban development, in its topography, layout, infrastructure, and physical form across the colony's early decades, while leaving an indelible imprint within our own time. The piecing together of this account has involved fine-grained archival research. One hopes that the outcome may demonstrate the value of such a 'micro-study' in the teasing out of evidence that would otherwise have remained hidden and has long done so. And so, this study, though relatively broad in material range, examines and recounts events directly concerning the urban formation of Hong Kong. As to the social, cultural, and political impacts that this dramatic set of physical transformations had on Hong Kong's community—and indeed upon a wider imperial and dispersed society—there is both need and opportunity for further work.

In the final reckoning, then, this book is not just an early history of a city, or even especially of a colonised settlement that quickly became a city. Instead, it analyses how a metropolis came about under the most precarious circumstances. Possibly unique among world cities, Hong Kong's urban settlement was founded upon brinkmanship: a bargaining chip to be exchanged by the British, if it were soon possible, for a greater prize from China. But, with ever more investments sunk into constructing Hong Kong, the stakes rose and the game quickly altered. It was replaced by another uncertainty: the settlers' very survival in the face of devastation mysteriously wrought upon them by a miasma called malaria. Urbanism, then, was a vital means of sustained security—of interdependent securities of investment and well-being. As a means to this end, Hong Kong's urban form was hurriedly assembled—through borrowing, inventing, copying, adapting—all manifested, as we shall see, in its physical and cultural construction.

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Notes

1 Lord Palmerston to Captain Elliot R.N., 21 Apr. 1841, as quoted in Hosea Ballou Morse, 'Appendix G', *The International Relations of the Chinese Empire, Vol. I: The Period of Conflict, 1834–1860* (London: Longmans, Green, and Co., 1910), 642. The description of Hong Kong Island as a 'barren rock' is a common misquotation.

2 Roy Porter, 'Public Medicine', *The Greatest Benefit to Mankind: A Medical History of Humanity from Antiquity to the Present* (London: Harper Collins, 1997), 262.

3 In Britain, this arose autonomously from advances within veterinary medical research. See Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865–1900* (Cambridge: Cambridge University Press, 2000), 16.

4 The National Archives, Kew [hereafter NA]; Colonial Office [hereafter CO] 133/7: 95a, William Morrison, 'Colonial Surgeon's Report for 1850', *Hong Kong Blue Book*: 1850, Mar. 1851.

5 Porter, *The Greatest Benefit*, 411.

6 NA; Admiralty [hereafter ADM] 1/5530, Inspector-General of Naval Hospitals and Fleets to The Secretary of the Admiralty, 26 Oct. 1843.

7 'Medicus', *Friend of China*, 22 June 1844.

8 This cautious view is supported by the medical historian Randall M. Packard: 'Constructing a global historical narrative for malaria is also difficult because, for much of the period covered [prehistory to the late nineteenth century] . . . there was no knowledge of the role of the malaria parasite in the transmission of the disease and thus no basis on which to make a definitive diagnosis of malaria. Without such evidence, we must rely on contemporary descriptions of symptoms to identify the disease.' See Randall M. Packard, *The Making of a Tropical Disease: A Short History of Malaria* (Baltimore: Johns Hopkins University Press, 2007), 17.

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11 Mark Harrison, *Disease and the Modern World: 1500 to the Present Day* (Cambridge: Polity Press, 2004), 157.

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16 Ibid.

17 Mark Harrison, 'Disease and Medicine in the Armies of British India, 1750–1830: The Treatment of Fevers and the Emergence of Tropical Therapeutics', in Geoffrey L. Hudson, ed., *British Military and Naval Medicine, 1600–1830*, Clio Medica, vol. 81, Amsterdam (New York: Rodopi, 2007), 89.

18 Ibid., 88–90.

19 Ibid.

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20 Ibid.

21 Michel Foucault, 'The Eye of Power', in Colin Gordon, ed., *Power/Knowledge, Selected Interviews & other Writings, 1972–1977* (New York: Pantheon, 1980), 151; see also Jiat-Hwee Chang, *A Genealogy of Tropical Architecture: Colonial Networks, Nature and Technoscience* (Abingdon, Oxon: Routledge, 2016), 3.

22 Foucault, 'The Eye of Power', 150–151. I elaborate on some of the categories.

23 Portions of Chapter Three 'A Town Redrawn, 1843–1844' have previously been published in Christopher Cowell, 'The Hong Kong Fever of 1843: Collective Trauma and the Reconfiguring of Colonial Space', *Modern Asian Studies*, vol. 47, no. 2 (March 2013): 329–364, in particular, parts of subchapters 'The "Hongkong Fever"', 'The Valley Experiment', 'A Link between Buildings and Miasma', and 'A Battle for the Centre'.

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25 G. A. Bremner, Johan Lagae, and Mercedes Volait, 'Intersecting Interests: Developments in Networks and Flows of Information and Expertise in Architectural History', *Fabrications*, vol. 26, no. 2 (2016): 236.

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40 William Tarrant, *Hongkong Part 1, 1839–1844* (Canton: Friend of China, 1861), 65–77.
41 Ibid., 65.
42 Ibid.
43 The earliest mention of the use of a daguerreotype in Hong Kong is found in an advertisement announcing the opening of a portrait studio in the *China Mail*, dated 6 Mar. 1845.
44 Hong Kong Public Records Office [hereafter HKPRO]; file: HKMS 140-1-1, 'Transcripts of Correspondence of Lieut. Thomas Bernard Collinson R.E., Dec. 1838–29 Mar. 1846' [hereafter 'Transcripts'].
45 Edward Cree, *Naval Surgeon: The Voyages of Dr. Edward H. Cree, Royal Navy, as Related in His Private Journals, 1837–1856*, ed. Michael Levien (New York: E. P. Dutton, 1982).
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57 Dafydd M. E. Evans, 'Chinatown in Hong Kong: The Beginnings of Taipingshan', *JHKBRAS*, vol. 10 (Hong Kong, 1970): 69–78.
58 Dafydd M. E. Evans, 'Jardine, Matheson & Company's First Site in Hong Kong', *JHKBRAS*, vol. 8 (Hong Kong, 1968): 149–153.
59 Dafydd M. E. Evans, 'The Foundations of Hong Kong: A Chapter of Accidents', in Marjorie Topley, ed., *Hong Kong: The Interaction of Traditions and Life in the Towns* (Hong Kong: Hong Kong Branch of the Royal Asiatic Society, 1975), 11–41.
60 Brenda S. A. Yeoh, *Contesting Space in Colonial Singapore: Power Relations and the Urban Built Environment* (Kuala Lumpur: Oxford University Press, 1996), 6.
61 The present title is a play on that famous axiom of the Modern Movement in architecture 'form follows function', a phrase coined by the Chicago-based architect Louis Sullivan in his essay 'The Tall Office Building Artistically Considered', *Lippincott's Magazine* (March 1896), 408, though the actual phrase is 'form ever follows function'.