

## Introduction

Colonial cultures have always been complex mixtures of the old and the new. Colonists in settler societies or imperial officials that carried out the business of dominating and exploiting other lands and peoples could recognise them as familiar or see Otherness, the depraved and the alien. In recent cultural histories of tropical medicine, scholars have been interested in the way medical discourses rested on and were in part constitutive of conceptions of difference. For doctors in London, Calcutta, Sydney, Townsville, Baltimore and Manila, racial difference was conceived of as being at the heart of the disease problems of the tropical territories settled, dominated and exploited by Europeans. Climate was seen to have been productive of the differences between peoples and races, so that, in the light of climatic theories of disease, the tropics posed a special threat to the health of Europeans. In these accounts, cultural historians have thus picked out discourses that focused on the apparently antagonistic relationship between the European, or “white”, body and the tropical climate, the view that saw the disease threat of the tropics as bodies out of place. In other words these histories have stressed the extent to which discourses of tropical medicine emphasised colonial difference and the Otherness of the tropics and its people.

This thesis will argue that medical discourses in tropical colonies and frontiers in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries were characterised, not only by a dichotomising construction of racial Otherness born out of imperialism, but also by transplanted

sanitary visions of the modern city and urban life. In focusing on public health in the specific urban, political and social context of late 19<sup>th</sup> century Calcutta and the writings of W. J. R. Simpson, the city's chief health officer in that time, this thesis will argue that while medical men wrote within an imperial discourse of difference, they also drew on discourses that framed disease in familiar sanitary terms.<sup>1</sup> In other words, Simpson and others, who moved between the colony and the metropole, saw life in tropical cities as posing the same sanitary and social problems, such as those of the slum, ventilation, odours, waste removal and clean water and food, that were created by the growth of towns in Britain and all of which were related to epidemics, infant mortality, social unrest, immorality and poor health, especially of the working classes.

Mark Harrison has examined an older tradition of writing on what were called the diseases of warm or hot climates, in particular the medical literature that really flourished after 1760, just as Britain became more involved in empire, especially in India. Harrison's broad argument is that the second half of the 18<sup>th</sup> century was in general marked by optimism about the chances of European settlement, despite the long association of the tropics with sickness and death.<sup>2</sup> Drawing on ancient Hippocratic and environmental ideas about disease and a mixture of religious and climatic theories about the origins of the bodies and minds of peoples around the world, many physicians argued that European settlers would soon adopt indigenous physical and physiological characteristics, so that the health threat of the tropical

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<sup>1</sup> Charles Rosenberg uses the term "framing" for the way in which diseases, while being biological realities, are also shaped in by moral and social discourses. See Charles Rosenberg, *Explaining Epidemics and Other Studies in the History of Medicine*, Cambridge University Press, New York, 1992, p. 305.

<sup>2</sup> Mark Harrison, *Climates and Constitutions: Health, Race, Environment and British Imperialism in India 1600-1850*, Oxford University Press, Oxford, 1999, pp. 59-61.

climate would be overcome.<sup>3</sup> Harrison argues that these views gave way in the 19<sup>th</sup> century, though not completely, as more rigid ideas about race and more physiological theories of disease became more prominent. Acclimatisation was unacceptable to those committed to the idea of European racial superiority.<sup>4</sup> However, despite these changes, one can see continuity between these periods. The body, or constitution, was almost the sole focus of this writing, and the idea that climate played a role in shaping bodily characteristics and therefore a role in disease, was central from the second half of the 18<sup>th</sup> through to the 20<sup>th</sup> century despite the emergence of a different language of “race”.

Warwick Anderson and Alison Bashford have examined the ways in which this medical creation of difference continued into the “germ age” and the first half of the 20<sup>th</sup> century. In contrast to older historical narratives of a germ theory revolution, the tropical climate continued to be seen as a threat to the white body in the first half of the 20<sup>th</sup> century. The spectre of disease and racial degeneration under the sun in the humid air coexisted with the knowledge of the malaria parasite. Bashford argues that the tropics existed in the medical imagination in much the same way as Edward Said argues the notion of the Orient did in the European mind.<sup>5</sup> The tropics were imagined as zones of Otherness, which produced in its native people characteristics that were inimical to those of whiteness and which thus threatened white health and racial integrity. Doubt about the possibility of white settlement in northern Australia continued into the 1920s, and even the most passionate believers in a “white north”,

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<sup>3</sup> Ibid, pp. 92-3; For ethnological thinking in this the late 18<sup>th</sup> century see Ivan Hannaford, *Race: the History of an Idea in the West*, Woodrow Wilson Centre Press, Washington D.C., 1996, pp. 202-33.

<sup>4</sup> Harrison, *Climates and Constitutions*, pp. 104-6, 112.

<sup>5</sup> Alison Bashford, “‘Is White Australia Possible?’ Race, colonialism and tropical medicine”, *Ethnic and Racial Studies*, vol 23(2), March 2000, p. 253.

such as Raphael Cilento, felt that the bodies of white workers had changed after several generations.<sup>6</sup> However ideas about race and climate could play a role in the tropics in conflicting ways. Nikki Henningham has noted that, while the recommendations about clothing in the tropics made by Raphael and Phyllis Cilento were based on a medical discourse of climate and racial difference, many settlers in northern Australia, especially women, maintained their traditional clothing in a desire to maintain racial distinctions and class status.<sup>7</sup>

Warwick Anderson in particular has focused on the ways that tropical medicine saw the disease threat as a problem of racial Otherness in the late 19<sup>th</sup> and early 20<sup>th</sup> century in the context of northern Australia and the Philippines. Doctors in northern Australia constantly worried about whether the hot climate would lead directly to the loss of white racial vigour or reduce the resistance of European stock to the specific diseases of the tropics.<sup>8</sup> It was not only this climatic determinism that created an anxiety about racial health. Race was just as important in the framework of germ theories of disease. The settler context of Australia meant that white Australians in the 1890s and early 20<sup>th</sup> century could, unlike British officials in India or West Africa, imagine their tropical environment as pure. Tropical diseases, like leprosy, smallpox, cholera and yellow fever, were seen to emanate from a swarming and unhygienic Asia, so that race appeared to be a marker of pathogenic germ threat.<sup>9</sup>

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<sup>6</sup> Ibid, pp. 262-264.

<sup>7</sup> Nikki Henningham, “‘Hats of, Gentlemen, to Our Australian Mothers!’ Representations of White Femininity in North Queensland in the Early Twentieth Century”, *Australian Historical Studies*, 2001, vol. 117, pp. 319-20.

<sup>8</sup> Warwick Anderson, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia*, Melbourne University Press, Melbourne, 2002, pp. 81-3.

<sup>9</sup> Ibid, pp. 92-4. For the perceived foreignness of disease see also Alison Bashford and Maria Nugent, “Leprosy and the management of race, sexuality and nation in tropical Australia”, in Alison Bashford and Claire Hooker (eds), *Contagion: Epidemics, History and Culture from Smallpox to Anthrax*, Pluto

Racial difference could also be thought of, in the colonial context, as the most important factor that could predispose individuals to disease, a notion that, as Anderson notes, was not endangered by changes in disease theories and ideas about therapy. Race could make certain peoples immune to diseases, as most American colonial doctors thought about Filipinos at the beginning of the 20<sup>th</sup> century.<sup>10</sup> White Americans in the Philippines were a race out of place, their bodies out of order, and thus more vulnerable to invasion by parasites.<sup>11</sup> Medical men also distinguished between American and Filipino waste practices, asserting, as Anderson argues, that the white American body, in making its waste invisible by using sanitary latrines, was separate from the world, private, controlled and thus civilised. The Filipino on the other hand, in supposedly urinating and defecating everywhere, was open to the world, public and uncivilised.<sup>12</sup>

E. M. Collingham has also focused on the white body in the tropics, examining the broader construction of the British body in India from the beginning of the 19<sup>th</sup> century to the middle of the 20<sup>th</sup> century. Drawing on medical texts, along with other materials related to daily public and domestic ritual, Collingham argues that in the second half of the 19<sup>th</sup> and into the 20<sup>th</sup> century, the Anglo-Indian body was increasingly distinguished from Indian bodies and separated from the tropical space.<sup>13</sup>

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Press, Sydney, 2002, pp. 110-1; Greg Watters, "The S. S. *Ocean*: Dealing with Boat People in the 1880s", *Australian Historical Studies*, 120, 2002, pp. 331-3.

<sup>10</sup> Warwick Anderson, "Immunities of Empire: Race, Disease, and the New Tropical Medicine, 1900-1920", *Bulletin of the History of Medicine*, 70(1), 1996, pp. 96-7

<sup>11</sup> *Ibid*, p. 98.

<sup>12</sup> Warwick Anderson, "Excremental Colonialism: public health and the poetics of pollution", in Alison Bashford and Claire Hooker (eds), *Contagion: Epidemics, History and Culture from Smallpox to Anthrax*, Pluto Press, Sydney, 2002, pp. 76-9.

<sup>13</sup> E. M. Collingham, *Imperial Bodies: The Physical Experience of the Raj, c. 1800-1947*, Polity Press, Cambridge, 2001, p. 117.

In this period, she argues, the ideal British body was seen as physically and morally superior and thus able to withstand the racially degenerating influence of the Indian climate.<sup>14</sup>

Research in the cultural history of tropical medicine has therefore focused itself most thoroughly on those parts of medical discourse that conceived of the body and its relation to the climate of the tropical colonies or frontiers as the central concern of European doctors and residents in those areas.<sup>15</sup> The racial body is seen by historians to have become the central lynchpin of tropical medicine, and thus a salient feature of its role in the nature of colonial society and politics. In other words, the medical discussion of race and disease was the discourse that played an important role in creating the Manichean, divided colonial world described by Frantz Fanon.<sup>16</sup> This scholarship has tremendous value and essential validity, as even a quick examination of medical literature from the 18<sup>th</sup> century through to after the Second World War will show. Bodily and racial differences were certainly central to discussions of the threat that the tropical colonies posed to Europeans. By concerning themselves with the body, the fundamental unit, experts in tropical medicine could depict the tropics as fundamentally unhealthy, while even the most strident defenders of the health of the tropics asserted the potential of the climate to alter the inherited physical characteristics of white labourers. In the age of germs, race was the main signifier of disease, as it was the native body that carried parasites and filthy native behaviour, entrenched in their hereditary being, which laid the foundations for epidemics of

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<sup>14</sup> Ibid, pp. 121-24.

<sup>15</sup> See also, David N. Livingstone, "Tropical climate and moral hygiene: the anatomy of a Victorian debate", *British Journal of the History of Science*, 32, 1999, pp. 93-110.

<sup>16</sup> Frantz Fanon, *The Wretched of the Earth*, trans. Constance Farrington, Grove Press, New York, 1968, pp. 38-42.

malaria, cholera, plague or sleeping sickness.

However, focusing on this racially dichotomising aspect of tropical medicine obscures the fact that other visions and discourses of health and disease in the tropics involved familiar threats and anxieties. While authors like Warwick Anderson have tended to de-emphasise the imperial metropole in their histories of empire and medical knowledge, there is a strong sense in some of the medical literature around the beginning of the 20<sup>th</sup> century that ways of framing disease threats were largely exported to the colonies from the various imperial centres, particularly in the case of public health.<sup>17</sup> Here, though race is not insignificant, the framing of disease in the tropics employed many of the same elements of discourse and imagery as it did in Britain, America and temperate Sydney. This means that even when the talk is of “natives”, one can find the same kind of discussion as was found in literature about the slums of London’s East End and the various people that inhabited them.

This thesis focuses largely on the work of William John Ritchie Simpson, the chief health officer of Calcutta and the author of two works on medicine, hygiene and sanitation in the tropics. The first, *The Maintenance of Health in the Tropics*, was a small book on personal hygiene and the diseases of the tropics, first published in 1905 after being commissioned by the London School of Tropical Medicine as a handbook intended for ordinary British residents in the tropics.<sup>18</sup> This was a very early example of a genre that expanded greatly during the First World War and the 1920s. The second, and more significant for this study, was a much larger collection of lectures

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<sup>17</sup> See Warwick Anderson, “How’s the Empire? An Essay Review”, *Journal of the History of Medicine and Allied Sciences*, 58, October 2003, pp. 462-3.

<sup>18</sup> W. J. R. Simpson, *The Maintenance of Health in the Tropics*, 2<sup>nd</sup> edition, John Bale, Sons and Danielsson, London, 1916.

called *The Principles of Hygiene as Applied to Tropical and Subtropical Climates*, on which the handbook was based.<sup>19</sup> This work consisted of writing not only on personal hygiene, clothing and exercise, but town planning, waste removal and the supply of food and water. It is this text, by a public health officer with urban experience in Scotland and India, written in a time of debate and transition in theories of disease and when India was developing industrially and changing politically, which will be the focus of this thesis.

In these texts, the substance of which were based on Simpson's time as the chief public health official in Calcutta in the 1880s and 90s, it is quite clear that the reproduction in the tropics of Victorian sanitary ways of framing threats to health were just as significant in certain contexts as the stress on the racial body and Otherness. Having spent time as health officer of Aberdeen, Simpson was in the tradition of 19<sup>th</sup> century sanitation, with its stress on clean air, water and food, while also being open to emerging ideas about bacteria. Worboys notes that Simpson took the side of those arguing for a bacterial theory of cholera in the 1890s.<sup>20</sup> Simpson would later write, "there is every reason to assume that in those diseases in which the specific organism has not been discovered, it nevertheless exists and is unrecognisable because of defective methods employed for its detection", though he added in somewhat older terms that "generally the infections seem to act as ferments in the body, their products causing disturbance of the system by chemical and physiological means".<sup>21</sup> Thus a

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<sup>19</sup> W. J. R. Simpson, *The Principles of Hygiene as Applied to Tropical and Subtropical Climates; And the Principles of Personal Hygiene in them as applied to Europeans*, John Bale, Sons and Danielsson, London, 1908.

<sup>20</sup> Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865-1900*, Cambridge University Press, Cambridge, 2000, p. 253.

<sup>21</sup> Simpson, *The Principles of Hygiene as Applied to Tropical and Subtropical Climates*, p. 342.

germ theory of some kind informed some of Simpson's views of public health, especially his attitudes to clean food. Yet it is clear that the old issues of ventilation, urban reform, waste removal and cleanliness were central to his ideas about public health.

In the usual discussions of the culture of tropical medicine, which focus on the body in climatic space, the material context of these discussions is neglected, with the result that the tropics are presented as simply village and climate. In the case of Simpson's career and writings, one can see that the tropics were often more than natives, villages and climate. Calcutta, for instance, was a major industrial city, which matched in size and population many European urban centres. Simpson had also worked as a health officer in the Scottish town of Aberdeen in the early 1880s, and an examination of his contribution to tropical medicine shows that Simpson took with him a sanitary concern with ventilation, cleanliness and public health that had informed the broad Victorian cultural reaction to urbanisation and the emergence of the metropolis. Thus while race and climate were important for the framing of the health threat in the tropics, the context of Calcutta and Bombay provided room for the discussion of urban sanitation and the urban underclass that had emerged from the 1830s in Britain.

Ever since the 1830s and, in particular, Edwin Chadwick's 1842 report into the living conditions of the working classes in Britain, sanitary reformers and Victorian society generally had been fascinated and appalled by urbanisation and the lives of the working classes and a motley underclass of street people. Books and articles on urban sanitary conditions and journalistic explorations into the mazes of slums and the people that made a living collecting waste and garbage on the streets

and sewers became very popular throughout the second half of the 19<sup>th</sup> century and into the 20<sup>th</sup> century. Reformers and public health officials stressed the importance of waste removal and the provision of ventilation for the dispersal of odours that threatened to cause disease. Slums, in their compacted, overcrowded and labyrinthine topography were demonised, not only as unhealthy places for their inhabitants and sources of disease for the rest of the city, but as nests of immorality and social unrest. For the middle classes, the inhabitants of slum streets were an unseen and uncontrollable danger to society. Thus slum clearance became from the 1870s to the early 20<sup>th</sup> century a major issue in Britain, Australia and the United States.<sup>22</sup>

Food also was an important concern of 19<sup>th</sup> century public health. Sanitary officers were interested in the dangers urban growth created for the supply of clean food and water, and in the late 19<sup>th</sup> and early 20<sup>th</sup> century milk became a major topic of discussion. Milk was seen as the most important food, yet also as the one most vulnerable to contamination and most likely to be the cause of epidemics and infant mortality. Experts condemned the pre-modern conditions of production, the unprotected movement of milk through the city and the ways that mothers handled it

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<sup>22</sup> See Edwin Chadwick, *Report on the Sanitary Condition of the Labouring Population of Great Britain*, Edinburgh University Press, Edinburgh, 1965; Henry Mayhew brought the lives of London's sewer-hunters and scavengers in, *London Labour and the London Poor*, volume II, Dover Publications, New York, 1968; For a discussion of sanitary science and the critique of the metropolis see Anthony Wohl, *Endangered Lives: Public Health in Victorian Britain*, J. M. Dent and Sons, London, 1983; Anthony Wohl, *The Eternal Slum: Housing and Social Policy in Victorian London*, Edward Arnold, London, 1977; chapter 4 of Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865-1900*, Cambridge University Press, Cambridge, 2000; Alan Mayne, *The Imagined Slum: Newspaper Representation in Three Cities 1870-1914*, Leicester University Press, Leicester, 1993; Michelle Elizabeth Allen, *Cleansing the City: Geographies of Filth and Purity in Victorian London*, Ph. D. Thesis, University of Virginia, 2001; Mary Poovey, *Making a Social Body: British Cultural Formation, 1830-1864*, University of Chicago Press, Chicago, 1995, chapter 6; Chapter 3 of Peter Stallybrass and Allon White, *The Politics and Poetics of Transgression*, Cornell University Press, Ithaca, 1986; David Pike, "Sewage Treatments: Vertical Space and Waste in Nineteenth-Century Paris and London", in William A. Cohen and Ryan Johnson (eds), *Filth: Dirt, Disgust and Modern Life*, University of Minnesota Press, Minneapolis, 2005, pp. 51-77.

once it was in the home. Thus milk was also, in part, a discourse of domesticity and the increasingly rigid and gendered division of the male public sphere and the female space of the home in the bourgeois culture of Britain and the settler societies it gave birth to.<sup>23</sup>

It is these discussions, of modernity, the city and the home, which one finds in Simpson's texts, and also in the variety of handbooks to tropical health that appeared in the decades before the Second World War. While race was a central interest for Simpson, Calcutta also presented the same kinds of perceived threats as created by the large cities and towns of Britain, America and Australia, which had led to so much anxiety for sanitary reformers, philanthropists and writers. The slums, or *bustis*, of Calcutta became the main target of Simpson efforts, as he surveyed these urban spaces and contended with an unsympathetic and reluctant municipal council, which was then responsible for public health and dominated by Hindu elites with interests in property.<sup>24</sup> Simpson and the many writers of popular handbooks that followed after him also wrote at significant length about food and the dangers of contamination by dust, flies and dung, replicating the features of the discussion of the urban milk supply that was going on in major cities around the world. It is argued here that Simpson in Calcutta, and his general writings on tropical sanitation, framed disease in ways that were not only centred on the body and bodily, colonial difference. In Simpson's text one finds concerns with slum space, ventilation, filth and social unrest that were the

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<sup>23</sup> See P. J. Atkins, "Sophistication detected: or, the adulteration of the milk supply, 1850-1914", *Social History*, 16(3), October 1991, pp. 317-39; Deborah Dwork, "The Milk Option: An aspect of the history of the infant welfare movement 1898-1908", *Medical History*, 31, 1987, pp. 31-69; T. B. Mephram, "'Humanising' Milk: The formulation of artificial feeds for infants (1850-1910)", *Medical History*, 37, 1993, pp. 225-249.

<sup>24</sup> Mark Harrison, *Public Health in British India: Anglo-Indian preventive medicine 1859-1914*, Cambridge University Press, Cambridge, 1994, pp. 213-18.

focal points of the 19<sup>th</sup> century sanitary tradition in Britain. It shows that the culture of colonial medicine could be and was a complex mix of discourses of racial and class difference and a critique of a familiar urban environment.

One has to keep in mind that ideas about colonial Otherness could inform discourses about the modern city. Erin O'Connor has looked at cholera in Britain in the 19<sup>th</sup> century, showing that the disease, described as "Asiatic", and the filthy urban conditions it was believed to spring from, were framed in terms of the threat of a foreign and depraved Other. Cholera was proof to some that urbanisation was reproducing Oriental degradation.<sup>25</sup> Yet there were many other diseases that occupied the minds of Victorian doctors and sanitarians, such as infantile diarrhoea, smallpox, scarlet fever and tuberculosis, and one should be wary of over-emphasising Oriental comparisons in the discourses of urbanisation to the point of obscuring the specific aspects of British city life, like its spaces and industrial work, that medical men, social reformers and writers were reacting to.

This thesis, then, will closely examine the writings of W. J. R. Simpson on tropical hygiene and sanitation to show the complex intersection of discourses of colonial and racial Otherness with other medical and cultural reactions to urban space and filth that were brought from Britain to India. Calcutta was not so much a frontier or a place on the colonial "periphery", but a major city of the British Empire, a proximity, it is argued, that goes some way to explaining how colonial medicine was not purely made up of discourses of racial Otherness, but replicated 19<sup>th</sup> century sanitary concerns about city life, to the extent that constructions of "the native" were

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<sup>25</sup> Erin O'Connor, *Raw Materials: Producing Pathology in Victorian Culture*, Duke University Press, Durham and London, 2000, pp. 28-31.

not wholly separated from constructions of the urban, slum- or sewer-dwelling Other.

The first chapter will provide a broad overview of the history and culture of medicine that focused on health and disease in the tropics, from the texts of the late 18<sup>th</sup> century through to the first half of the 20<sup>th</sup> century. It will try to demonstrate continuity and discontinuity over this long period, and show that the argument that tropical medicine played a central role in articulating racial difference via discussions of bodies and climates is an essentially valid one. Chapters two and three will go on to qualify this view, showing that in certain contexts, in this case Calcutta, tropical medicine also replicated metropolitan formulations of health and disease in the urban environment. Chapter two will look closely at Simpson's arguments about slums, town planning and waste, showing the extent to which his concerns about ventilation and waste removal were derived from existing Victorian discourse. It will also suggest how constructions of the "the native" were related to and intersected with constructions of slum-dwellers and "the great unwashed" in sanitary literature. Chapter three will go on to examine the issue of milk, a vital food made dangerous by urban growth. Many experts in tropical sanitation and hygiene addressed the issue of milk, the routes it took from production to the home, and the way it was handled by mothers, replicating many aspects of the milk debate seen in Britain, America and Australia.

Thus this thesis will show that while a discourse of Otherness was important, the culture of tropical medicine could have other dimensions and axes, a complex view of the disease landscape shaped by a specific context. In arguing this it stresses the need to see colonial culture as diverse and malleable, in which race and the body was one kind of axis of discourse. It thus seeks to demonstrate the dynamic

relationship between colony and imperial centre, in which the colony was never constructed as purely Other. In Calcutta and Simpson's sanitary writings, one sees an example of this exchange of notions of disease, modernity, race and class.