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Malaria: The Representation of Tropical Diseases in Literature during the Colonial Era

Abstract

This study analyses the representation of tropical diseases in literature during the colonial era. Tropical diseases were central to the thinking of the public during the colonial era due to the large number of deaths in colonies at the time. The concept of medical geography is outlined, including the mapping of all diseases to the tropics, even those whose origin was unknown. This supposed connection between diseases and the tropics is at the origin of colonial novels such as Heart of Darkness which utilize this connection for metaphors concerning imperialism and race. Indeed, it is shown that tropical diseases, which are connected to foreigners and other races, were used during the Victorian era as indicators of the lower-class. The cause of the tropical fever is said to be a breach of moral values such as indulging in one's passions. It is therefore striking how little literary narratives were influenced by medical knowledge, even when they were written by physicians such as Paul D'Oceton. A case study of the two versions of Daisy Miller shows how incorporating modern scientific knowledge into the reading of a novel can change its interpretation. The history of consumption, now called tuberculosis, shows very clearly how unrealistically a disease can be perceived by the public because of literature. Whereas tropical diseases were not always represented accurately in the writings of upper-class novelists, they extensively featured in the travel writings of the poor soldiers who were those most affected by disease. Indeed, war literature provides some of the most detailed accounts of tropical disease, including its human impact. Finally, it is concluded that tropical diseases were intimately linked to all the aspects loathed by upper-class Victorian society. Indeed, by labelling all diseases

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tropical and by limiting their infectiousness to the 'others', the upper-class essentially liberated itself from the threat that was apparent in this new surge of disease. It not only provided them with a method of becoming mentally immune to the diseases, but also with a new way of justifying their superiority to the others. The picture that is therefore painted is a grim one, with those that were most affected by disease being those that could do the least about it. However, this picture is accurate and still relevant today, as malaria is now only limited to the poorest countries. All the scientific textbooks state that malaria causes poverty in the countries affected by it, but it may be more correct and poignant for them to state that poverty causes malaria in the countries affected by it.

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Introduction

Disease has been with humans since the dawn of time and so has its presence in literature. The representation of disease in literature is important in influencing medical decisions as medicine will always focus on the needs of the people, and these needs are most clearly represented in the literature that is written. Disease literature is however also influenced by medicine, as new insights into diseases can change the perception of disease in the eyes of the public. The representation of disease in literature has not been uniform through time, as its impact on society can vary from one era to another. One important era in terms of disease is the colonial era, a time when significantly more people travelled overseas, encountering a large array of new diseases. The focus of this study is the representation of disease during the era of colonialism, commonly understood to have been at its peak during the late 19th century and beginning of the 20th century. However, as disease is the main subject, particularly malaria, this definition is too narrow to fully encapsulate the volume of important literature in existence. Malaria was originally endemic in Britain and appears in many literary texts, where it is referred to as 'ague' or later as a tertian or quartan fever¹, like in Shakespeare's Macbeth, where Macbeth gives the order to hold back the enemy near the end of the play: "Here let them lie, Till famine and the plague eat them up."². While early instances of the ague being mentioned are vague and could as well refer to typhus or some other disease such as is the case here, this passage brings up one important theme that is common to colonial experiences treated in this dissertation: tropical diseases and their importance in warfare.

1 Chin, T. & Welsby, P. (2004) Malaria in the UK: past, present, and future. Postgrad Med J, Vol. 80, pp. 664.

2 Shakespeare, W. (1606) Macbeth. Act V. Scene V. Accessed through: www.shakespeareswords.com/PlayList.aspx [Seen: 25.06.2013]

Malaria began to decline around 1800 until it became virtually eradicated by the end of the century³. Britain then came back into contact with it during the expansion of the empire during the imperialist age, producing the bulk of the available literature. This dissertation will therefore widen the meaning of 'colonial era' to span the time period in which Britain was undertaking the establishment of settlements in other parts of the world. This therefore goes back as far as the 17th century with Scotland becoming united with England and the first real 'colonial' literature appearing⁴, particularly as a result of the Atlantic slave trade⁵. While this creates a large time frame, arguably one too large to fully deal with here, the focus is on very specific events within this time frame: encounters with tropical diseases, particularly malaria.

It has been stated that malaria was not unknown before expeditions to the tropics as it was an endemic disease, however the colonial experience with it was a completely different one. The colonial era was a time of global movement, with an unprecedented number of people travelling long distances across the globe⁶. It was therefore also a time of a large number of people first coming into contact with tropical diseases, including malaria which had been virtually eradicated from Britain by that time. This renewed contact did not just include those that travelled to the tropics, but also those that stayed behind. The number of people that travelled to the tropics was so vast that a very large proportion of those that stayed behind were either related to or knew someone who had travelled there⁷. Additionally, a large number of tropical diseases were also imported back to Britain as sick seamen and soldiers returned from their

3 Chin, T. & Welsby, P. (2004) Malaria in the UK: past, present, and future. *Postgrad Med J*, Vol. 80. Page 665.

4 Bewell, A. (1999) *Romanticism and Colonial Disease*. Johns Hopkins University Press, London. Page 21.

5 Curtin, P. (1969) *The Atlantic Slave Trade: A Census*. University of Wisconsin Press, London. Page 20.

6 Hulme, P. & Youngs, T. (2002) *The Cambridge Companion to Travel Writing*. Cambridge University Press, Cambridge. Page 3.

7 Bewell, A. (1999) *Romanticism and Colonial Disease*. Johns Hopkins University Press, London. Page 14.

travels, creating a “common market of bacilli”⁸ as Emmanuel Le Roy Ladurie notes. This increased exposure to the diseases was also amplified by the fact that the diseases were so much more deadly and infectious than local diseases due to the British not having any genetic resistance to them: in response to this Georges Pouchet wrote in 1864 that “Statistics have
45 shown the dangers of changing one’s position on the globe.”⁹. This increased exposure and lethality of the diseases meant that the colonial era was a time that was dominated by disease narratives.

The dissertation will therefore treat an aspect of society that was incredibly important at the time, namely the encounter with tropical diseases. While the focus will be on malaria, all
50 ‘tropical’ diseases will be dealt with. To achieve a full overview of the themes dealt with here, it is necessary to first detail the different diseases that are of importance, particularly malaria. Then it is important to define the meaning of ‘tropical’, and the image of the tropics to the people at that time. After these preliminary aspects, a detailed analysis will follow looking at the relationship between the environment and disease, particularly the concept of ‘mapping’ diseases
55 which was common at the time. Following on from that, the link between social class and tropical diseases will be explored, particularly concerning behaviour and race. Finally, these two aspects of environment and social class will then be drawn together to outline the complex causal chain that connects disease to them both in a vicious circle of poverty and disease.

60

8 Le Roy Ladurie, E. (1981) *A Concept: The Unification of the Globe (14th to 17th Centuries)*. The Mind and Method of the Historian. University of Chicago, Chicago. Page 41.

9 Pouchet, G. (1864) The Plurality of the Human Race. Longman & Roberts, London. Page 92.

The Scientific Disease

It is important to define what is exactly considered a 'tropical' disease in this study. In order to do so, a scientific discourse needs to be adopted in this section. Also, due to the focus on malaria, it is necessary to first gain an intricate knowledge of the disease scientifically, as well as of its medical history. The first difficulty is to define what is precisely meant by the 'tropics'. In the past, a geographical measure was adopted to define the region, with the tropics being "between 23° 30' north latitude and 23° 30' south latitude"¹⁰. However, this definition has the obvious drawback that it includes mountainous areas which are hardly 'tropical' in the sense of the diseases that they harbour. From the many descriptions of the 'tropics' in literature and medicine, two features stand out as recurring in all of them, namely heat and humidity. Indeed, Patrick Manson, the father of tropical medicine, also called tropical diseases "diseases of warm climates"¹¹ in reference to these two features. Therefore, tropical diseases will be defined here as diseases requiring high temperatures and high humidity to be endemic, independently of their geographic location. This definition therefore excludes diseases that are also found in temperate zones, but it does include those found in the western world if the conditions in which the disease is found in Europe are the same as in the tropics, meaning high temperatures and high humidity.

The disease that will be focused on in this study is malaria, a disease caused by five different species in the *Plasmodium* genus. Malaria kills close to one million children per year, causing substantial grief and economic loss in the countries in which it is endemic¹². The

10 Frenkel, S. (1996) North American Representations of Tropical Panama. *Geographical Review*, Vol. 86, pp. 317–333. Page 318.

11 Arnold, D. (1997) *The place of 'the tropics' in Western medical ideas since 1750*. Tropical Medicine and International Health, Vol. 2, pp. 303–313. Page 304.

12 Volkman, S., Neafsey, D., Schaffner, S., Park, D., and Wirth, D. (2012). *Harnessing genomics and genome biology to understand malaria biology*. Nature Reviews, 13:315–327. Page 315.

80 *Plasmodium* parasites are transmitted from human to human through the bite of mosquitoes, the most important of which are the species in the *Anopheles gambiae* species complex¹³. Various methods have been employed in attempting to eradicate malaria such as the insecticide DDT, but all have failed up to the present day¹⁴. The hope of the 21st century for malaria eradication is the promise of transgenic mosquitoes¹⁵, which have been widely researched for many years.

85 This research has been accelerating yearly, especially since the publication of the entire genome sequence of both the parasite and the vector in 2002^{16,17}.

Malaria has been with humans for thousands of years, Hippocrates having described the clinical symptoms in 500 BC¹⁸. The Romans in particular believed that malaria was caused by bad

13 Weetman, D., Wilding, C., Steen, K., Pinto, J., and Donnelly, M. (2011). *Gene flow-dependent genomic divergence between anopheles gambiae m and s forms*. *Mol. Biol. Evol.*, 29:279-291. Page 279.

14 Pennisi, E. (2002). *Parasite genome sequenced, scrutinized*. *Science*, 298:33-34. Page 33.

15 Alphey, L., Beard, B., Coetzee, M., Crisanti, A., Curtis, C., Eggleston, P., Godfray, C., Hemingway, J., Jacobs-Lorena, M., James, A., Kafatos, F., Mukwaya, L., Paton, M., Powell, J., Schneider, W., Scott, T., Barabara, S., Sinden, R., Sinkins, S., Spielman, A., Toure, Y., and Collins, F. (2002). *Malaria control with genetically manipulated insect vectors*. *Science*, 298:119-121. Page 119.

16 Gardner, M., Hall, N., Fung, E., White, O., Berriman, M., Hyman, R., Carlton, J., Pain, A., K., N., Bowman, S., Paulson, I., James, K., Eisen, J., Rutherford, K., Salzberg, S., Craig, A., Kyes, S., Chan, M., Nene, V., Shallom, S., Suh, B., Peterson, J., Angiuoli, S., Pertea, M., Allen, J., Selenguf, J., Haft, D., Mather, M., Vaidya, A., Martin, D., Fairlamb, A., Fraunholz, M., Roos, D., Ralph, S., McFadden, G., Cummings, L., Subramanian, G., Mungall, C., Venter, J., Carucci, D., Hoffman, S., Newbold, C., Davies, R., Fraser, C., and Barrell, B. (2002). *Genome sequence of the human malaria parasite Plasmodium falciparum*. *Nature*, 419:498-511. Page 498.

17 Holt, R., Subramanian, G., Halpern, A., Sutton, G., Charlab, R., Nusskern, D., Wincker, P., Clark, A., Ribeiro, J., Wides, R., Salzberg, S., Loftus, B., Yandell, M., Majoros, W., Rusch, D., Lai, Z., Kraft, C., Abril, J., Anthouard, V., Arensburger, P., Atnison, P., Baden, H., de Berardinis, V., Baldwin, D., Benes, V., Biedler, J., Blass, C., Bolanos, R., Boscus, D., Barnstead, M., Cai, S., Center, A., Chaturverdi, K., Christophides, G., Chrystal, M., Clamp, M., Cravchik, A., Curwen, V., Dana, A., Delcher, A., Dew, I., Evans, C., Flanigan, M., Grundschober-Freimoser, A., Friedli, L., Gu, Z., Guan, P., Guigo, R., Hillenmeyer, M., Hladun, S., Hogan, J., Hong, Y., Hoover, J., Jaillon, O., Ke, Z., Kodira, C., Kokoza, E., Koutsos, A., Letunic, I., Levitsky, A., Liang, Y., Lin, J., Lobo, N., Lopez, J., Malek, J., McIntosh, T., Meister, S., Miller, J., Mobarry, C., Mogin, E., Murphy, S., O'Brochta, D., Pfannkoch, C., Qi, R., Regier, M., Remington, K., Shao, H., Sharakhova, M., Sitter, C., Shetty, J., Smith, T., Strong, R., Sun, J., Thomasova, D., Ton, L., Topalis, P., Tu, Z., Unger, M., Walenz, B., Wang, A., Wang, J., Wang, M., Wang, X., Woodford, K., Wortman, J., Wu, M., Yao, A., Zdobnov, E., H., Z., Zhao, Q., Zhao, S., Zhu, S., Zhimulev, I., Coluzzi, M., della Torre, A., Roth, C., Louis, C., Kalush, F., Mural, R., Myers, E., Adams, M., Smith, H., Broder, S., Gardner, M., Fraser, C., Birney, E., Bork, P., Brey, P., Venter, J., Weissenbach, J., Kafatos, F., Collins, F., and Hoffmann, S. (2002). *The genome sequence of the malaria mosquito Anopheles gambiae*. *Science*, 298:129-149. Page 129.

18 Wisner, M. (2011) *Protozoa and Human Disease*. Garland Science, London. Page 167.

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air, 'mal aria', emanating from swamps¹⁹. The *Plasmodium* species are parasites found inside red
90 blood cells and liver cells of affected people, a discovery originally made by Charles Laveran in
1880 which marked the beginning in understanding the physiology of the disease agent²⁰. It was
also the first evidence that the disease was caused by an organism and not simply by the
environment. The parasite is transmitted by *Anopheles* mosquitoes, a fact that was hypothesized
95 by Manson and later confirmed by Ronald Ross in 1897 in India, an achievement for which he
received the Nobel Prize²¹. Malaria is a highly debilitating disease. The main symptom of malaria
is a tertian fever, or quartan fever in *P. malariae*, meaning that every three days, or four days
for *P. malariae*, the affected person will undergo a severe paroxysm²². This fever is characterised
by three distinct phases, an initial cold phase, followed by a hot phase, and finally a sweating
stage, lasting a total of up to 8 hours²³. These three-stage paroxysms recur every few days, in-
100 between which the patient feels healthy²⁴. The paroxysms are due to the parasite bursting from
the red blood cells they grow in, causing a severe immune reaction. The blood cells get
destroyed by the parasite in this process, leading to progressive anaemia. Normally, *Plasmodium*
species do not cause death, but one particularly virulent species, *P. falciparum*, which is found
mostly in Central and West Africa²⁵, causes the majority of malaria-related deaths. This is due to
105 occasional sequestration in the brain, termed cerebral malaria, or in the placenta in pregnant

19 Harrison, G. (1978) Mosquitoes, Malaria and Man: The history of the hostilities since 1880. John Murray, London. Page 8.

20 Harrison, G. (1978) Mosquitoes, Malaria and Man: The history of the hostilities since 1880. John Murray, London. Page 11.

21 Harrison, G. (1978) Mosquitoes, Malaria and Man: The history of the hostilities since 1880. John Murray, London. Page 78.

22 Chin, T. & Welsby, P. (2004) *Malaria in the UK: past, present, and future*. Postgrad Med J, Vol. 80, pp. 663-666. Page 664.

23 Wisner, M. (2011) Protozoa and Human Disease. Garland Science, London. Page 174.

24 Wisner, M. (2011) Protozoa and Human Disease. Garland Science, London. Page 174.

25 Wisner, M. (2011) Protozoa and Human Disease. Garland Science, London. Page 176.

women. This study will focus on malaria because the colonial era was the time when most of the ground-breaking discoveries were made about this complicated and deadly disease. It is also important to note that malaria killed nearly half of all colonialists in the tropics every year at the time²⁶. This sets the stage for how much malaria was on the colonialist mind at the time, and to what extent it featured in literature as a consequence of this.

The Literary Allegory

The tropics have always been viewed as the 'other', Initially tales abounded about the riches of those areas, "...the world between the tropics was much more of a "New World" than North America had ever been..."²⁷, however as contact increased, so did stories about the dangers of those unknown lands, "[Tropical fevers are] greatly more violent in their attack, quicker in their progress, and more fatal..."²⁸. The tropical world was often compared to the netherworld in literature; in The Voyages of St Brendan for example, the main character travels to hell where he meets "pygmy-like dwarfs with black faces"²⁹, highlighting the connection between the exotic world and the world below³⁰. This connection was however not completely drawn out of the blue: the tropics were deadly to European explorers. The lack of innate immunity to the local diseases meant that travelling to the tropics was a dangerous endeavour, with Sierra Leone being known as "the white man's grave" due to the mortality that Europeans

26 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp. 773-808. Page 786.

27 Curtin, P. (1964) The Image of Africa: British ideas and action, 1780-1850. University of Wisconsin Press, Madison. Page 58.

28 Hunter, J. (1788) Observations on the diseases of the army in Jamaica. Nicol, London. Page 14.

29 Plummer, C. (ed. and trans.)(1922) *Navigatio Sancti Brendani*. Lives of Irish Saints. Oxford University Press, Oxford.

30 Vynckier, H. (1992) *Exotic Hades: The representation of alien lands as underworlds in European literature*. History of European Ideas, Vol. 14, pp. 863-876. Page 865.

were suffering from in that region³¹. Most medical literature was written by Europeans and it is therefore clear that the tropics would be branded as harbouring extremely dangerous diseases. It is this link between the tropics and disease which caused the advent of the science of medical geography or topography.

Medical geography was based on the fundamental belief that different diseases are endemic to different regions of the globe. This belief has existed since Hippocratic times where, according to Finke, Hippocrates argued that the diseases from which people suffer are related to the environment that they are in³². Before the discovery of germ theory, it was thought that people became sick from bad air, or mal-aria, which was caused by the environment, such as swamps. The thought of mapping diseases to different areas of the globe was therefore very much in keeping with the prevalent scientific disease theory of the time. Disease was thought to occupy nature similarly to plants and animals, being fixed in a certain place, indeed being representative of a certain location³³. Tropical diseases came to define what was meant by the tropics. While the mapping of diseases proclaimed a heterogeneous distribution of diseases in the temperate regions, with certain diseases thought to originate from France for example, this heterogeneity did not translate to the tropics. The dangers of tropical diseases were generalized across the entire region classified as the tropics, "...regional overgeneralization painted all places as dangerous by virtue of their location..."³⁴. The extensive travelling at the time through exploration, colonisation, and slave trade also transferred diseases between tropical areas, such

31 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 11.

32 Barret, F. (1993) *A Medical Geographical Anniversary*. Social Science and Medicine, Vol. 37, pp.701-710. Page 703.

33 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 34.

34 Frenkel, S. (1996) North American Representations of Tropical Panama. Geographical Review, Vol. 86, pp. 317-333. Page 321.

as from Africa to South America, essentially homogenizing that entire region of the globe³⁵. The tropics have also traditionally been linked with extensive growth, visitors commenting on the growth of vegetation in the tropics as a “flood of tropical vegetation”³⁶, and just as plants and animals flourish, so do diseases according to the medical theory at the time³⁷. Resulting from these overgeneralizations and homogenizations was a deeply ingrained thought of the tropics being linked to disease³⁸. Due to the prevalence of malaria in Africa and yellow fever in South America, the entire concept of ‘fever’ became associated with a tropical climate. As germ theory only came into being in the late 19th century, the underpinning diseases of the fevers were not known. They were generally thought to all be the same affliction, simply varying in acuteness. Tropical fevers were much more virulent than temperate ones due to the lack of immunity of the Europeans. The link of diseases to the geographical region of the tropics, as well as the belief that all fevers were essentially the same disease meant that a fever caught in a temperate area such as England was still considered a tropical affliction. According to Margaret Pelling, there was a strong push to “merge intermittent and continued fever into a single class whose members owed their peculiarities to factors in the different climates in which they arose”³⁹. The climates of course referred to the tropical and temperate climates. Extensive travel literature exists which makes this link between geographical region and disease clear, especially early accounts by missionaries who were among the first to travel to central Africa, “...missionaries similarly make

35 Frenkel, S. (1996) North American Representations of Tropical Panama. *Geographical Review*, Vol. 86, pp. 317–333. Page 322.

36 Tomes, R. (1855) Panama in 1855: An Account of the Panama Rail-Road, of the Cities of Panama and Aspinwall, with Sketches of Life and Character on the Isthmus. Harper & Brothers, New York. Page 78.

37 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 34.

38 Arnold, D. (1997) The place of ‘the tropics’ in Western medical ideas since 1750. *Tropical Medicine and International Health*, Vol. 2, pp. 303–313. Page 309.

39 Pelling, M. (1978) Cholera, Fever and English Medicine, 1825–1865. Oxford University Press, Oxford. Page 19.

reference to interior or climate fever and [...] central Africa fever.”⁴⁰.

The fact that the very nature of virulent diseases was linked to the environment of the tropics had a variety of effects. Firstly, as tropical diseases were linked to the environment and not to the people, it provided colonialists with a humanitarian pretext to take over those areas⁴¹.
 165 They were able to proclaim that they were doing the local populations a favour, by altering their habitat to make it epidemiologically less harmful. As colonialists saw how healthy they were in England compared to the tropics, William Farr noted in 1852 that “England, according to the latest observations, is the healthiest country in the world”⁴², which reinforced the notion of the superiority of the temperate regions. This is amplified by the fact that many tribes in the tropics
 170 were exterminated by disease with the arrival of the Europeans as they imported European diseases to the regions they explored, while they themselves were unaffected by their own diseases⁴³. William Bradford wrote upon observing the locals die from disease, that by “providens of God not one of the English was so much as sicke”⁴⁴. Indeed, the limitation of tropical diseases to a certain region provided the colonialists with a sense of security, a belief that they were out
 175 of reach of the deadly sicknesses prevalent in those areas. However this was a false sense of security, as incidences of disease pandemics in England increased significantly during the colonial era, such as the outbreak of cholera in 1817⁴⁵. The advent of medical geography can therefore be seen as an attempt to keep the diseases out of England, at least within people’s

40 Endfield, G. & Nash, D. (2007) *'A good site for health': Missionaries and the pathological geography of central southern Africa*. Singapore Journal of Tropical Geography, Vol. 28, pp 142–157.

41 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 34.

42 Farr, W. (1848) British House of Commons Parliamentary Papers. Ninth Annual Report of the Registrar General. London. Report VII.

43 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 5.

44 Jameson, F. (editor) (1908) Original Narratives of Early American History. Scribner, New York. Page 313.

45 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 41.

minds. It also provided them with means to cope with their susceptibility to them: namely by
180 keeping their environment as temperate as possible. Just as diseases seemed to invade England,
so did the tropics themselves. As stated before, fevers caught in England were now seen to be a
tropical affliction. Importantly, these fevers usually occurred in poor areas, especially those
which resembled the conditions in the tropics, such as the hot and humid interior of a factory.
James Currie states that “among inhabitants of the cellars, and of... back houses, the typhus is
185 constantly present”⁴⁶, even though it was long thought to have virtually disappeared at the time.
The tropics seemed to be inherent within England, just that this had gone unnoticed, similarly to
how malaria used to be endemic in England. It was through hard effort that malaria had been
eradicated, but it seemed that the tropics were re-emerging. The tropics were therefore more
than simply the “dark edge bordering Western biomedical identity”⁴⁷: they were an
190 unacknowledged though intrinsic part of it. It is this fact that the temperate and tropical are so
difficult to untangle, yet seemingly completely distinct in the minds of the people at the time,
that makes the discourses and literature surrounding the tropical diseases so interesting and
poignant. It is through the way that the tropical diseases are represented, that we can learn
more about the sense of identity that English people had at the time, medically, culturally, and
195 politically.

46 Currie, J. (1789) Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Fever and Other Diseases: 2nd Edition. M^oCreery, Liverpool. Page 221.

47 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 19.

Environment and Disease

200 The first aspect of this sense of identity that will be discussed is the medical side of it. Due to the link between certain environments and disease, a clear distinction could be drawn between temperate diseases and tropical diseases depending on the climate in which they were caught. It was through this distinction that Englishmen understood their biological difference to other people. The fact that English people were more resistant to temperate diseases than
205 people from the tropics asserted their superiority. On the other hand, their susceptibility to tropical afflictions reinforced the notion of needing to change this dangerous tropical environment. It was through these differences in susceptibility to diseases that English people were able to understand their own medical identity. They essentially read themselves through their colonial other. They only truly became temperate through the definition of the tropics, as
210 they only became English through the exposure to tropical diseases. This fundamental link between the medical identity of Englishmen and the diseases of the tropics is evident in the writings of the time.

A prime example where the link between the environment and tropical diseases is clear, can be found in Heart of Darkness by Joseph Conrad⁴⁸. In Heart of Darkness, it is stated that if
215 a person can support the climate, then they will survive, “You stand the climate– you outlast them all.”⁴⁹, tightly linking the fever that kills all the men in the novel to the tropical climate. Importantly, what makes these men English is the fact that they are susceptible to the disease, unlike the natives. Heart of Darkness has won literary acclaim for the way in which it portrays the tropics as the dangerous unknown. Indeed, this is most obviously reflected in the title where

48 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London.

49 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 46.

220 the tropics are the 'darkness', an entity associated with the unknown and the dangerous. Travels into central Africa, or the heart of darkness, had failed multiple times due to disease, with it being thought of as being the most pestilential area in the world. This was also the reason why it was the last area in Africa to be explored, being portrayed as a large black space on the maps of Africa during the colonial era, "Its very silence [blankness] speaks of its pathogenic nature"⁵⁰.

225 The first successful journey into the Congo was made by Mungo Park in his 1795–97 expedition, though this was not followed by any other successful exploration for several more decades⁵¹. This pestilential portrayal of the region was common knowledge at the time and would have been on the mind of people reading Heart of Darkness, even though the diseases were better understood at the time of writing. In one instance in the novel, returning to Europe is equated with having

230 "survived the awful climate."⁵². Disease is said to be "skulking in the air, in the water, in the bush."⁵³, again connecting it to the location. Critics have stated that Heart of Darkness presents the pinnacle in presenting the tropics as pestilential dangerous areas, even as hell itself, "...as a province of hell."⁵⁴. The natives are much less affected by the tropical diseases because they are filled with the darkness of the region, even being called "the devils of the land"⁵⁵. The fact that

235 disease is said to be skulking in the bush is interesting because the natives are said to be hiding in the bushes throughout the novel, "The natives are in the bush."⁵⁶. This creates a correlation between the natives and disease. Not only are the natives unaffected by the tropical diseases,

50 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 196.

51 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 204.

52 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 9.

53 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 9.

54 Vynckier, H. (1992) *Exotic Hades: The representation of alien lands as underworlds in European literature*. History of European Ideas, Vol. 14, pp. 863–876. Page 868.

55 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 70.

56 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 76.

but they are even transmitting them. The novel makes the relationship between environment and disease very clear, meaning that the connection between the natives and disease reduces the natives to being part of the environment, just like the local fauna. Moreover, the link between the tropics, disease and darkness is omnipresent in the novel, linking the natives to the darkness, such as the natives gathering around the river causing “a shadowy embrace”⁵⁷. This again contrasts with how the Englishmen are shown to be full of light. Megan Vaughan states in Curing Their Ills: Colonial Power and African Illness that in the minds of Europeans, Africa is “a repository of death, disease and degeneration, inscribed through a set of recurring and simple dualisms– black and white, good and evil, light and dark”⁵⁸. The representation of African natives as pestilential beings full of darkness goes back to the early view of Africa as a netherworld of sorts as in The Voyages of St Brendan. This belief of linking the natives to the netherworld demonstrates how medical arguments were used to reinforce beliefs of white superiority at the time.

Throughout the novel, the British seem to bring the light into this darkness as the natives see them as “Something like an emissary of light”⁵⁹. Bringing the light to a region may therefore represent an attempt by the colonialists to cure the colonial areas through habitat change. Their memories of Europe are also correlated with light, “...in the august light of abiding memories”⁶⁰, the Thames is a “luminous estuary”⁶¹ and even the mist, usually thought of as

57 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 88.

58 Vaughan, M. (1991) Curing Their Ills: Colonial Power and African Illness. Stanford University Press, Stanford. Page 3.

59 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 18.

60 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 6.

61 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 5.

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pestilent, is “like a gauzy and radiant fabric”⁶² in Essex. However, this light is not inherent to England, it was made to be so by Englishmen, Marlow states “‘And this also [...] has been one of the dark places of earth’”⁶³. The relationship between the environment (and therefore disease) and light is clear: changing the habitat to get rid of the diseases means bringing the light. 260 Ironically, they do not bring salvation but rather disease to the natives, who end up being “nothing but black shadows of disease and starvation”⁶⁴. This again portrays the Europeans as superior as they do not become affected by these temperate diseases.

It is important to put Heart of Darkness into the context of its time. Published in 1902, it is situated near the end of the colonial era. Germ theory had been more or less universally 265 accepted by that time, and major discoveries were being made in tropical medicine. Fevers could now be classified into different diseases such as malaria and yellow fever. In the travel accounts of the physician George Low, written in 1901, he writes about propagating the knowledge of mosquito transmitted malaria, “...impressed on them as much as possible the mosquito malaria infection”⁶⁵. This implies that this knowledge, while new, was quickly becoming more common at 270 that time. The fact that Heart of Darkness places such heavy emphasis on the old scientific belief of miasma and the climate itself causing the diseases is very interesting. It suggests that the novel is playing towards the ingrained fear of the tropics that had been with the English since the beginning of the colonial era. While the belief of miasma and tropical climate could easily be used to further nationalistic and racial beliefs, this was not the case for germ theory. Before 275 germ theory, disease was seemingly inherent to the ‘meta’-environment, which was able to

62 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 6.

63 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 7.

64 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 24.

65 Low, G. (2009) *Doctor George Low's Expedition in 1901-02. Caribbean Diseases*. Ed. Gordon Cook. Radcliffe Publishing Ltd, Oxford.

influence people through the climate. Due to this, the old belief lent itself much more to social critique.

Joseph Conrad's history has to be taken into account here, mainly because Heart of Darkness was based on real life experiences⁶⁶. Conrad had been travelling aboard ships to and from the tropics since he was seventeen years old. Heart of Darkness details his most traumatic expedition, namely to the Congo. The atrocities that he saw there traumatized him and left him sick with fever for the rest of his life. Throughout Heart of Darkness, Marlow hears glorious stories about Kurtz, who in the end is shown to have gone crazy to a certain extent, "Why! He's mad,' I said."⁶⁷. Kurtz committed the most horrific atrocities, such as exhibiting the heads of the rebels he killed, "those heads on the stakes"⁶⁸. These events and others portrayed in the novel mirror what Conrad saw when he went there. The title of the novel may therefore not simply refer to the location of the plot, but to the darkness within the hearts of the people. This interpretation has a variety of consequences on what has been discussed so far. The connection between the tropics and darkness has already been detailed, meaning that the darkness within the hearts of the colonialists is therefore a tropical affliction. In a way, Kurtz has become 'tropicalized'. Throughout the novel, the light that the Englishmen start out with becomes less bright and Kurtz represents what happens when this light vanishes. Indeed, Kurtz is said to "have something wanting in him"⁶⁹ and that due to this deficiency the "wilderness had found him out early"⁷⁰. The thing that he may have lacked was the light within his heart and this made him

66 Anonymous b (2013) *Joseph Conrad*. Encyclopedia Britannica. Accessed through: <http://www.britannica.com/EBchecked/topic/133148/Joseph-Conrad> [Seen: 03.07.2013]

67 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 81.

68 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 82.

69 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 83.

70 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 83.

295 vulnerable to the climate of the tropics, turning him into the man he was in the end. It has been stated before that the natives are linked to darkness, being part of the 'fauna' of the heart of darkness, the tropics. Kurtz, in his metamorphosis of being tropicalized, becomes more and more like the natives. The practice of placing heads on spikes was usually associated with natives or uncivilized nations as the practice was stopped in the UK at the end of the 17th century with the last heads on spikes on London Bridge going back to 1678⁷¹. Indeed, Marlow is not shocked by the heads because he states that it is "only a savage sight"⁷², something that was to be expected in the tropics. Kurtz's characteristics of brutality and excessive greed are also traits that were linked to the natives at the time, as well as satisfying his lusts "gratification of his various lusts"⁷³. The most striking evidence of his change into a native is his integration with the natives themselves, becoming their chief, "Kurtz got the tribe to follow him, did he?"⁷⁴, and even having a native mistress, "Only the barbarous and superb woman [...] stretched tragically her bare arms after us"⁷⁵. This transformation is slowly ongoing in all the colonialists in the novel, Marlow stating that he "was getting savage"⁷⁶ due to his hunger. It is thus clear that Kurtz has undergone a transformation during his time in the tropics, namely being taken over by the

310 tropics.

Linking this back to disease, we can associate this change with the theme of the tropics affecting the mind and sanity. Throughout the novel, Kurtz is constantly affected by disease,

71 Anonymous c (2013) *London Bridge*. Accessed through: <http://www.history.co.uk/explore-history/history-of-london/bridge-over-turbulent-waters.html> [Seen: 06.07.2013]

72 Conrad, J. (1902) *Heart of Darkness*. Penguin Popular Classics, London. Page 83.

73 Conrad, J. (1902) *Heart of Darkness*. Penguin Popular Classics, London. Page 83.

74 Conrad, J. (1902) *Heart of Darkness*. Penguin Popular Classics, London. Page 83.

75 Conrad, J. (1902) *Heart of Darkness*. Penguin Popular Classics, London. Page 97.

76 Conrad, J. (1902) *Heart of Darkness*. Penguin Popular Classics, London. Page 32.

with one of the earliest reports stating that “Mr. Kurtz was ill”⁷⁷. Curing Kurtz is portrayed as a great feat, “proudly, managed to nurse Kurtz through two illnesses”⁷⁸. Kurtz remains sick, becoming more and more so as the novel progresses and finally dies of the disease in the end. It is significant to note that Marlow and Kurtz are often compared by other characters due to their reputation, but while Kurtz is constantly sick, Marlow is not. Therefore, Kurtz having become tropicalized may be linked to the diseases that he suffers from. There was a belief in the early 19th century that people became more susceptible to disease if they gratified their lusts, a theme that will be dealt with in detail later in this dissertation. Kurtz is obviously gratifying his lusts, slipping deeper and deeper into the tropics and therefore becoming more and more affected by the diseases. Indeed, the light that the colonialists have within them at the beginning of their travels may symbolise the moral values imposed upon them by their civilization, and that the loss of this light is correlated with a loss of morals and an increase in lustful desires. The behaviour of Kurtz is thus both the cause of his pathological condition as well as a symptom of it. Kurtz projects a pessimistic image of what happens to colonialists if they remain in the tropics for too long. This belief of continued exposure leading to a loss of discipline and hence disease was a popular theory in the 19th century. Prolonged stays in the tropics were correlated with lifelong illnesses and mental delirium, such as the fevers which Conrad suffered from following his trip to the Congo. This portrayal of the colonial experience by Conrad suggests something that goes beyond contemporary medical knowledge at the time. The reason that Conrad chose to forego germ theory to portray disease may simply be because he needed the climatological explanation to rationalize the mental transformation that people undergo in the tropics. This

77 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 32.

78 Conrad, J. (1902) Heart of Darkness. Penguin Popular Classics, London. Page 83.

mental transformation was very much present as Conrad observed it himself when he went to the
 335 tropics, but it cannot be explained by germ theory. Without the link between disease, darkness
 and the tropics, Kurtz's insanity could not be explained, as it was most certainly linked to the
 tropics. Therefore, Conrad is not making a statement concerning medical or pathological
 representations at the time, but rather social ones. He uses the old and ingrained dualism of
 light and darkness with all its facets including disease, to criticise the colonial endeavours at the
 340 time. He manages to criticise the colonial system using the colonial medical vocabulary. Heart of
 Darkness is therefore a good example to illustrate the link between the tropics and disease, but
 it also goes further and criticises the social and political system. It touches on a variety of
 themes that will be discussed later on, such as the link between diseases and social class, race,
 and behaviour and will therefore be referred to a few more times as appropriate.

345 Charlotte Bronte uses tropical disease for a similar purpose, namely as a metaphor for
 social criticism, in particular with regard to the situation of women. In her novel Shirley (1849)
 she refers to the cholera epidemic of 1848–1849 with numerous references to contagion and
 symptoms of tropical fever. The novel is set in early 19th century England and these diseases are
 occurring in England. However they are branded as originating from the tropics “...yellow taint
 350 of pestilence [...] poisoned exhalations of the East [...] breath of Indian plague.”⁷⁹. Caroline
 Helstone, one of the two female protagonists, falls ill with a tropical fever “...So long as the
 breath of Asiatic deserts parched Caroline's lip and fevered her veins, her physical
 convalescence could not keep pace with her returning mental tranquillity”⁸⁰. Indeed, the noxious

79 Bronte, C. (1849) Shirley. London. Accessed through: <http://www.gutenberg.org/files/30486/30486-h/30486-h.htm> [Seen: 27.04.2013]

80 Bronte, C. (1849) Shirley. London. Accessed through: <http://www.gutenberg.org/files/30486/30486-h/30486-h.htm> [Seen: 27.04.2013]

airs of the tropics can only be gotten rid of by ventilating them with a European breeze, “A little
 355 cloud [...] arose in the west [...] the livid cholera tint had vanished from the face of nature: the
 hills rose clear round the horizon, absolved from that pale malaria-haze.”⁸¹. Tropical illness,
 which the heroines are powerless to avoid or control, signifies the lack of command Bronte’s
 female characters have over their own world. Illness acquires a symbolic and transformative
 power with a clear social message. As in Conrad’s Heart of Darkness, in Shirley the body
 360 afflicted by a tropical disease crystallizes an ideological conflict. This conflict is about race
 relations in Heart of Darkness, about gender relations in Shirley.

In Jane Eyre, Charlotte Bronte associates the tropical climate of the West Indies with the
 characters of Richard and Bertha Mason. Thus the tropics are used as a breeding ground for
 Bertha’s mental illness and for the deaths and sadness that followed. It is in the tropics that Mr
 365 Rochester met and married his ill-suited bride. Thus the tropics are again closely linked to
 illness and to evil and uncontrolled behaviour. By contrast Jane Eyre represents the western
 wind that blows away the sallow noxious airs of the tropics, hence her name, Jane Air.

The fact that the tropics are largely inhabited by non-white races led to an erroneous but
 wide-spread association between tropical disease and race. Thus malaria was linked with non-
 370 white races, an idea that persisted well into the 20th century. Cuban authorities required
 immigrants to go through quarantine if they were non-white, because of fears that diseases
 might be imported into the country, “Haitians and British West Indians, like the germs they
 purportedly carried, were to be [...] contained at Cayo Duan.”⁸². Whilst health concerns were no

81 Bronte, C. (1849) Shirley. London. Accessed through: <http://www.gutenberg.org/files/30486/30486-h/30486-h.htm> [Seen: 27.04.2013]

82 McLeod, M. (2010) “*We Cubans Are Obligated like Cats to Have a Clean Face*”: *Malaria, Quarantine, and Race in Neocolonial Cuba, 1898-1940*. The Americas, Vol. 67, pp 57-81.

doubt genuine, this assimilation between race and disease was also used as a justification for
375 racist prejudices, “...the measure was motivated by more than just narrow public health
interests.”⁸³.

A glaring example of racist prejudices based on erroneous scientific beliefs can be found
in Chair Noire⁸⁴ and L’Amour et la Mort⁸⁵, two novels written by Paul-Etienne Vigne, pen-name
Paul D’Octon. These novels were published in 1889 and 1890 respectively. Vigne was a medical
380 doctor in the French navy at the time, so he could have been expected to be aware of ongoing
research in tropical diseases, especially malaria in the years preceding the publication of his
novels. However this does not seem to have been the case. It is true that it was only in 1897
that Ronald Ross published the results of his ground-breaking research, namely that the malaria
parasite is transmitted through the bites of *Anopheles* mosquitoes. Until then, the tropical
385 climate and the environment, including the native populations were considered as agents of
transmission. This is also the case in Chair Noire and L’Amour et la Mort. Both novels are set
in Africa and deal with the sexual encounters between races. The novels show white men
catching malaria by engaging in sexual intercourse with the local natives, thus putting forth an
idea that non-white races constitute a lethal danger to the white man with strict racial
390 segregation as the only possible protection. The title of Chair Noire, which likens native women
to black flesh underlines the dehumanising effect of this approach, seeing nothing in them but a
dark and evil source of infection with a clear message that different races should not

83 McLeod, M. (2010) “*We Cubans Are Obligated like Cats to Have a Clean Face*”: *Malaria, Quarantine, and Race in Neocolonial Cuba, 1898-1940*. *The Americas*, Vol. 67, pp 57-81.

84 D’Octon, P. (1889) Chair Noire. Lemerre, Paris.

85 D’Octon, P. (1890) L’Amour et la Mort. Lemerre, Paris.

interbreed⁸⁶. The title of the other novel also establishes an unequivocal, but unjustified link between love with a native and death. In Chair Noire, the main character Frantz, a Frenchman, rapes Aissata, a Senegalese native, with the scene being described as “against nature”⁸⁷ and Aissata’s resistance being the “instinctive recoil of race, obeying the inflexible law of conservation!”⁸⁸. As a result of this rape, their son is disfigured, “...monstrous little being...”⁸⁹. Later Aissata falls in love with a local inhabitant, whereas Frantz eventually contracts malaria and dies. His death is presented as a consequence of having transgressed the laws of nature, and malaria is a means through which nature re-establishes her rights and moral transgressions are sanctioned⁹⁰.

In L’Amour et la Mort, the storyline is similar. The novel tells the story of a group of young soldiers who travel to Senegal with high hopes and expectations regarding the attractions of the tropics. For them this includes meeting the local prostitutes. Throughout the novel, these soldiers slowly waste away to malaria. Descriptions of the prostitutes make their pestilential nature clear, “...guided by fever, along a path of which her kisses were the flowers, she led them all towards death.”⁹¹. Throughout history prostitutes have been associated with certain diseases, notably syphilis, but L’Amour et la Mort associates them with a non-sexually transmitted disease, malaria. Moreover it shows them to be immune to it themselves. The disease is directly referred to as malaria, and symptoms experienced by the soldiers support this diagnosis.

86 Yee, J. (2002) *Malaria and the Femme Fatale: Sex and Death in French Colonial Africa*. Literature and Medicine, Vol. 21. pp 201–215. Page 203.

87 D’Octon, P. (1889) Chair Noire. Lemerre, Paris. Page 142.

88 D’Octon, P. (1889) Chair Noire. Lemerre, Paris. Page 142.

89 D’Octon, P. (1889) Chair Noire. Lemerre, Paris. Page 240.

90 Yee, J. (2002) *Malaria and the Femme Fatale: Sex and Death in French Colonial Africa*. Literature and Medicine, Vol. 21. pp 201–215. Page 204.

91 D’Octon, P. (1890) L’Amour et la Mort. Lemerre, Paris. Page 37.

Whereas the way these soldiers contracted malaria is scientifically wrong, the course of the illness is described with great accuracy, especially the development of anaemia, which is a key determinant of malaria. Throughout the novel, visits to the prostitutes are connected to a loss of blood, such as when one particular soldier wakes up in the prostitute's house to find "a little less
 415 blood in his veins."⁹², or when the prostitutes are described as a "flock of vampires."⁹³. The overall message of the novel is the same as in Chair Noire, namely that races must not mix and that transgression of this law results in death.

Apart from this racist message, another familiar conclusion can be drawn from these novels, namely the recurring association of the tropics with disease and death and the absence of
 420 social and moral values. The novels do not portray any changes in the natives nor are they diseased themselves but the mere contact with the exotic triggers all these changes in the colonialists. The novels portray the tropics as dangerous in and of themselves, thus supporting the idea of keeping a safe distance from them. This conclusion can also be drawn from the fact that Paul D'Octon went on to promote anti-colonialism, not so much because he was interested
 425 in the humanitarian aspect of it for the natives⁹⁴, but rather due to his deep-seated belief that different races should keep away from each other. On the other hand, it can be concluded that the fear of the tropics and the stigma of mingling with other races sprang from an instinct of self-preservation on the part of the British ruling class, trying to preserve its values and beliefs and above all its own supremacy in the face of a mysterious 'other' whose destructive power
 430 threatened to derail the imperialist expansion and the stability of Victorian society itself.

92 D'Octon, P. (1890) L'Amour et la Mort. Lemerre, Paris. Page 67.

93 D'Octon, P. (1890) L'Amour et la Mort. Lemerre, Paris. Page 141.

94 Yee, J. (2002) *Malaria and the Femme Fatale: Sex and Death in French Colonial Africa*. Literature and Medicine, Vol. 21. pp 201-215. Page 203.

Social Status and Disease

While there is a considerable amount of writing on the relationship between tropical diseases and foreignness, less attention has been paid to the connection between tropical diseases and social standing. Social class was of great importance in the 19th century and at the beginning of the 20th century. Many literary works focused on characters attempting to live up to their social standing or being ashamed for having failed to do so. The exploration of the world with the ensuing colonizations led to an increased contact with other civilizations and other populations. This development introduced a new dimension into the structure and hierarchy of social classes, with natives being seen as the lowest of the low. This view of the natives foreshadows the relationship that tropical diseases will play in connection with social class.

One important feature that needs to be considered first is the establishment of the socio-economic landscape of disease, a concept first pioneered by Sir James Ranald Martin in his 1813 publication, The Influence of Tropical Climates on European Constitutions, which was afterwards revised multiple times until 1856⁹⁵. The book was so well received at the time that it went through seven editions and critics at the time stated: “...we cannot too strongly recommend the volume as a companion necessary to every naval and military surgeon”⁹⁶. The historic and social importance of the publication is therefore undisputed. In this high-profile publication, Martin describes the link between human behaviour and health. He argues that health is intimately tied to social behaviour. He states that it was the discipline of Europeans that allowed them to rid

95 Martin, J. (1856) The Influence of Tropical Climates on European Constitutions, Including Practical Observations on the Nature and Treatment of the Diseases of Europeans on Their Return from Tropical Climates. Churchill, London.

96 Anonymous a (1856) *Reviews and Notices: The Influence of Tropical Climates on European Constitutions*. Association Medical Journal, Vol. 4. pp 6–8. Accessed through: <http://www.jstor.org/stable/25496919> [Seen 27.04.2013]

450 Europe of malaria, “The marshes are drained [...] and vanquished nature yields its empire to man...”⁹⁷, and that slothfulness would enable the return of disease, “...a body of men who are idle and intemperate [...] the inhabitants will become unhealthy...”⁹⁸. The Victorians believed that good health was the result of self-discipline, moderation, hygiene, and an upright way of life. Therefore it was thought at the time that health was intimately related to morality, any failing in
 455 morality taking its toll on one’s body. Morality in turn was linked to social status, with the pundits of society presenting themselves as beacons of morality to the rest of the people “...attitudes toward the relationship between people, place, and disease inform everyday description of landscapes, weather, and people.”⁹⁹. In this way, illness came to be regarded as a personal failing, poor health indicated a lack of self-control or a failure to conform to social
 460 norms.

There are two novels that are of particular interest in this context, namely Jane Eyre by Charlotte Bronte¹⁰⁰ and Daisy Miller by Henry James¹⁰¹. The differences between the 1879 and the 1909 versions of Daisy Miller¹⁰² are particularly meaningful. For Jane Eyre, the connections of disease to place have already been established in the previous section, however the novel
 465 goes further than that and also links the suffering from disease to low morality and low social

97 Martin, J. (1856) The Influence of Tropical Climates on European Constitutions, Including Practical Observations on the Nature and Treatment of the Diseases of Europeans on Their Return from Tropical Climates. Churchill, London. Page 21.

98 Martin, J. (1856) The Influence of Tropical Climates on European Constitutions, Including Practical Observations on the Nature and Treatment of the Diseases of Europeans on Their Return from Tropical Climates. Churchill, London. Page 138.

99 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773–808. Page 787–788.

100 Bronte, C. (1847) Jane Eyre. London. Accessed through: <http://www.publicbookshelf.com/romantic-suspense/jane-eyre/> [Seen: 27.04.2013]

101 James, H. (1909) Daisy Miller. Harper & Brothers Publishing, London.

102 Hathaway, R. (undated) *Daisy Miller, by Henry James– The 1879 version vs the 1909 version*. Accessed through: <http://www2.newpaltz.edu/~hathaway/daisyvariorum.pdf> [Seen: 25.04.2013]

class. The fever epidemic that broke out at Lowood School and killed Helen Burns was a common occurrence in a poor school like Lowood where deprived children struggled to survive with little food and no comfort. Other reflections on the relationship between poverty and disease are first mentioned in a link by Southwood Smith, "...a small and heated apartment in London [...] analogous to a stagnant pool in Ethiopia..."¹⁰³. Jane's parents die from typhus, the disease having been caught "while visiting among the poor of a large manufacturing town..."¹⁰⁴, an area later described as pestilent. The connection between poverty and disease was particularly relevant at the time, as during the writing of Jane Eyre an epidemic of cholera was spreading through the lower classes, making Jane Eyre highly topical¹⁰⁵. And of course, the tragedy in Charlotte Bronte's own family, the loss of her mother and five of her siblings in a very short period of time is a stark reminder that illness and death were very much part of everyday life for the poor at the time. The belief that somehow all these people were responsible for their own fate was particularly callous on the part of the middle class, who were able to afford the comfort and medication denied to those who were born poor and kept poor by a rigid class structure and inflexible social hierarchy. Low morality which was often seen as a corollary of low social class compounded the proneness to tropical fevers. This is evidenced in Jane Eyre by Richard and Bertha Mason. While the relevance of their origin in the West Indies has already been mentioned, low morality is another factor linking them to tropical disease. This is especially

103 Smith, S. (1830) A Treatise on Fever. London. Accessed through: <http://archive.org/stream/treatiseonfever00smituoft#page/n7/mode/2up> [Seen: 28.04.2013] Page 364.

104 Bronte, C. (1847) Jane Eyre. London. Accessed through: <http://www.publicbookshelf.com/romantic-suspense/jane-eyre/> [Seen: 27.04.2013] Page 26.

105 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773-808. Page 801.

true for Bertha. ...”¹⁰⁶. Bertha succumbs to the tropics due to her lack of morality, “her
 485 excesses had prematurely developed the germs of insanity”¹⁰⁷. Richard fears a worsening of his
 condition when offered an alcoholic drink, as giving in to alcohol was said to increase
 vulnerability to tropical fevers. He therefore refuses a drink even though he is close to dying,
 “‘Drink Richard; it will give you the heart you lack, for an hour or so..!’ - ‘But will it hurt me?
 Is it inflammatory?’ - ‘Drink! Drink! Drink’”¹⁰⁸. It was common for medical practitioners to
 490 advise patients suffering from malaria to avoid anything that would increase the body’s
 temperature, such as alcohol, but also strong passions and overeating¹⁰⁹. The taboo on alcohol,
 overeating and strong passions is of importance here, as giving in to those meant both a fall
 from grace in terms of social class, but also vulnerability to tropical fever. Colonisers therefore
 had to “maintain even higher standards of moral.”¹¹⁰. The suggestion that moral failings and a
 495 lack of self-discipline and moderation brought on tropical fevers put the blame on the victims
 themselves, contrary to emerging knowledge about the pathogenesis of these diseases.

Like Jane Eyre, Daisy Miller deals with the issue of morality and disease, but the story is
 set at a later period, after the discovery of the mode of transmission of malaria. Due to the
 revision that the novel underwent, a change can be seen in the scientific perception of malaria as
 500 well as in its relation to morality¹¹¹. The novel focuses on a young American girl, called Daisy

106 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773-808.
 Page 795.

107 Bronte, C. (1847) Jane Eyre. London. Accessed through: <http://www.publicbookshelf.com/romantic-suspense/jane-eyre/> [Seen: 27.04.2013] Page 311.

108 Bronte, C. (1847) Jane Eyre. London. Accessed through: <http://www.publicbookshelf.com/romantic-suspense/jane-eyre/> [Seen: 27.04.2013] Page 216.

109 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773-808.
 Page 795.

110 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773-808.
 Page 795.

111 Marsh, S. (2012) *Malaria and the Revision of Daisy Miller*. Literature and Medicine, Vol. 30, pp 1-10. Page 1.

Miller, who travels to Italy and becomes involved with the local lower class, specifically a suitor called Giovanelli. Apart from Giovanelli, another man called Winterbourne also courts her, but he is an upper-class American expatriate. It is this difference in social class between the two men that is of crucial importance in understanding the attitudes to malaria. Throughout the novel, there is talk about the danger to Daisy's health through her association with the lower-class Giovanelli. For instance when Winterbourne finds her with Giovanelli in the Colosseum at night, he says, "...you will not think Roman fever very pretty. This is the way they catch it. [...] such a terrible indiscretion."¹¹². This quotation shows both how the disease, malaria, is again associated with a particularly hot and humid location, Rome, and how Daisy has apparently compromised her health by not observing moral standards of behaviour and going out with Giovanelli. When Daisy dies in the end, the blame seems to be entirely on her for having failed to live up to the moral standards of her society and there is little sympathy for her, "It's going round at night [...] that's what made her sick."¹¹³.

However, Henry James significantly revised the novel 31 years later, in 1909, in order to take into account the scientific progress in the understanding of malaria at the time. This revision and the new insights into the pathogenesis of malaria completely changed the interpretation of the events in the novel¹¹⁴. While in the 1879 version, the blame seemed to lie with Daisy, the alteration of some wording in the 1909 version seems to shift the blame to the expatriate American community. With the knowledge that malaria is transmitted by mosquitoes, the reason for preventing Daisy from seeing Giovanelli boils down to nothing more than social

112 James, H. (1909) *Daisy Miller*. Harper & Brothers Publishing, London. Page 111.

113 James, H. (1909) *Daisy Miller*. Harper & Brothers Publishing, London. Page 115.

114 Marsh, S. (2012) *Malaria and the Revision of Daisy Miller*. *Literature and Medicine*, Vol. 30, pp 1-10. Page 2.

prejudice, her health and safety not being an issue any more. On the contrary, her health is put in jeopardy by the upper-class society's unwillingness to let Daisy go out and see Giovanelli during daytime. She therefore has to sneak out at night, the time of day when mosquitoes are most active. She is excluded from upper-class society and ostracized by being 'cut', meaning
 525 that a greeting is not returned, "He saw me - and he cuts me dead!"¹¹⁵. This is a significant alteration from the 1878 version which read "He saw me- and he cuts me!"¹¹⁶. What kills Daisy in the new version is not malaria, but the fact that she is excluded from society, that someone cuts her dead. As her name suggests, she is a flower and cutting a flower will kill it. Therefore, an analysis of Daisy Miller provides a subtle but insightful study of the relationship between
 530 malaria and social-class. Moreover, the two different versions of the text which flank the discovery of the mode of transmission of malaria chronologically, prompt an interesting range of conclusions that can be drawn about the interaction of science and literature, and to what extent progress in science has affected the writing of literature.

When discussing the relationship between social status and disease, it is important to
 535 mention the advent of 'consumption' as a status symbol. Consumption was a term used to describe the disease now known as tuberculosis, an illness caused by *Mycobacterium tuberculosis*¹¹⁷. It was of great epidemiological importance during the Victorian era and is still killing millions of people today. What is interesting about consumption is that while most diseases were associated with a low social class, the opposite was the case with consumption
 540 during the Victorian era. Percy Bysshe Shelley wrote in Adonais about John Keats who had

115 Hathaway, R. (undated) *Daisy Miller, by Henry James- The 1879 version vs the 1909 version*. Accessed through: <http://www2.newpaltz.edu/~hathawar/daisyvariorum.pdf> [Seen: 25.04.2013]

116 James, H. (1909) Daisy Miller. Harper & Brothers Publishing, London. Page 113.

117 Morens, D. (2002) *At the Deathbed of Consumptive Art*. Emerging Infectious Diseases, Vol. 8, No. 11, pp 1353-1358. Page 1353.

recently died of consumption as “a pale flower by some sad maiden cherished, and fed with true-
 love tears, instead of dew, the bloom, whose petals nipped before they blew, died on the promise
 of the fruit, is waste; the broken lily lies- the storm is overpast.”¹¹⁸. Shelley’s elegy romanticized
 the terrible disease that had killed Keats and that was killing him too at the time of writing,
 545 stating that the disease consumes the afflicted person from within such as the blooming flower
 dying on the promise of the fruit¹¹⁹. The people suffering from consumption were said to be living
 life to its fullest, being consumed by their passions and therefore dying young. Indeed, the storm
 that is overpast in Shelly’s elegy is the violent storm of passions. The intensity of consumption
 left the afflicted without energy and pale, such as the pale flower Keats is compared to in the
 550 elegy. It can be argued that this elegy by Shelley is at the origin of the positive image of
 consumption during the 19th century, the person being “consumed from within by its
 passions”¹²⁰. Paradoxically, while tropical diseases were seen as something wild and low caused
 by the breach of morals, consumption was also thought of as indulging in one’s passions.
 Consumption was not seen as a tropical disease. It was romanticized by being associated with
 555 poetic genius, even though it shares many aspects with tropical diseases. Keats was not free of
 criticism during his time, and much of it concerned the representation of the tropics in his
 poetry¹²¹. It therefore seems that the link between consumption and the tropics may not have
 been completely overlooked during his time.

Keats’s famous poem, Endymion, was described by a reviewer at the time as not being a

118 Shelly, P. (1953, ori. 1821) *Adonais*. English Romantic Poetry and Prose (Ed. Noyes, R.). Oxford University Press, Oxford. Page 1077.

119 Morens, D. (2002) *At the Deathbed of Consumptive Art*. Emerging Infectious Diseases, Vol. 8, No. 11, pp 1353-1358. Page 1354.

120 Morens, D. (2002) *At the Deathbed of Consumptive Art*. Emerging Infectious Diseases, Vol. 8, No. 11, pp 1353-1358. Page 1354.

121 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 172.

560 poem, but an “ecstatic dream of poetry– a flush– a fever.”¹²². The concept of fever again held all the usual connotations of the tropics. His poems were described as having “mischief at the core”¹²³, as having “an effeminacy of style”¹²⁴ and as being “soft and fleshy, without bone or muscle”¹²⁵. Indeed, his early poems were often blamed for Keats’s ongoing sickness, with the mere imagining of tropical spaces in those poems bringing on epidemiological consequences for

565 the writer¹²⁶. It is therefore of interest to examine one of the last poems Keats composed, To Autumn, as this poem is often praised as the most ‘English’ poem in existence. As Geoffrey Hartman notes, it is “an ideological poem whose very form expresses a national idea.”¹²⁷. What is interesting, is the reason why Keats suddenly changed his style to a nationalistic one instead of a tropical one as was common in his earlier works. It may be argued that while his earlier poems

570 allowed him to indulge in his passions, they made him sick, and that he hoped by changing his style to also turn around his health¹²⁸. What is striking however is how below the façade of Englishness, the tropics are still present. The opening of To Autumn reads “Season of mists and mellow fruitfulness, close bosom–friend of the maturing sun; conspiring with him how to load and bless with fruit the vines that round the thatch–eaves run...”¹²⁹. The Englishness of this opening

575 is apparent in its descriptions of the ‘maturing sun’ which is much less violent than the burning sun of the tropics, the ‘mellow’–ness of the fruits similar to the English climate which was seen

122 Anonymous d (1820) *Rev. of Endymion, by John Keats*. Baldwin’s London Magazine. pp 380–389. Page 381.

123 Conder, J. (1820) *Rev. of Lamia, Isabella, the Eve of St. Agnes, and Other Poems, by John Keats*. Eclectic Reviews. Vol. 14, pp 158–171. Page 171.

124 Hazlitt, W. (1931) The Complete Works of William Hazlitt. Ed. F. P. Howe. 21 Volumes. Dent, London. Page 254.

125 Hazlitt, W. (1931) The Complete Works of William Hazlitt. Ed. F. P. Howe. 21 Volumes. Dent, London. Page 255.

126 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 176.

127 Hartman, G. (1975) The Fate of Reading and Other Essays. University of Chicago Press, Chicago. Page 126.

128 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 184.

129 Keats, J. (1982) Complete Works. Ed. Jack Stillinger. Harvard University Press, Cambridge. Page 320.

as 'mellow', and the mention of 'thatch-eves', again typically English. The word 'conspiring' can also be interpreted as 'breathing', from the Latin 'conspirare'¹³⁰, something wholly untropical as the tropics were seen as unventilated areas of pestilential air. The tropics also do not have the same seasons as temperate regions, and addressing the poem to one of these seasons, autumn, as well as opening the poem with the word 'season' further established the poem as being 'English'. However, while this nationalistic interpretation of the opening is obvious, the lines do contain aspects that hint at the tropical poetry that Keats used to write. It is important to note that malarial fever is most common during autumn, a fact that may not be a coincidence as Keats attended lectures at Guy's hospital, where lectures included statements such as "noxious effects of marsh effluvia [are common] especially in autumn, when heat is often greatest, and many vegetables spontaneously die..."¹³¹. This description in itself casts a shadow over the opening of To Autumn, as the sun is suddenly seen as 'conspiring' (as in a conspiracy) against the fruit. Indeed, the fact that autumn is described as the 'season of mists' raises again deeply ingrained preconceptions of malaria being transmitted by mists or bad air. As rotting fruits and vegetables are seen as pestilential themselves, medical topographers during the colonial era saw them as the main origin of the malarial mists, brought on by the hot sun¹³². This was in turn influenced by the fact that the tropics were seen as overflowing with fruit and vegetables. It may even be argued that this waste of food is what causes the malarial air, as the fruits and vegetables are left uneaten and exposed to the sun. The blame for the disease is therefore returned to the indigenous people who do not 'appreciate' what they are provided with by nature. This

130 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 177.

131 Babington, W. and Curry, J. (1802-1806) Outlines of a Course of Lectures on the Practice of Medicine, as Delivered in the Medical School of Guy's Hospital. Bensley, London. Page 15.

132 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 177.

preconception of the lower-classes having everything they need and not appreciating it is most clearly demonstrated in the popular belief that Mary Antoinette told the populace to eat cake when they did not have any bread, “à qui l’on disait que les paysans n’avaient pas de pain, et
 600 qui répondit: Qu’ils mangent de la brioche.”¹³³. The fact that the sun in To Autumn is ‘mature’ moderates the danger imposed by its scorching heat. Indeed, England is also represented as having a ‘mellow’ fruitfulness compared to the tropics. What therefore becomes clear through this analysis is that England is not portrayed as a completely different area in To Autumn, but rather as a sort of ‘controlled’, less extreme, kind of tropics. As Bewell states of To Autumn’s
 605 Englishness “it achieves this quality differentially, by rewriting the fever-ridden features of the tropics”¹³⁴.

Consumption was a disease thought to originate from an indulgence in one’s passions. Keats’s passion was poetry and writing poetry was therefore often considered as being the cause of Keats’s death in Rome. However, when looking at the situation more closely, it becomes
 610 apparent that different types of poetry have different effects on the poets, at least according to the medical practitioners at the time. Indeed, Keats’s attempt to temper the tropical spaces in his poetry, such as in To Autumn, may be evidence of an attempt to temper his passions, as he “look[ed] on fine Phrases like a Lover”¹³⁵. The feverish poetry of the tropics caused fever, and so a more controlled poetry was necessary. It was thought that consumption could be treated by
 615 leading a moral life and may explain the attempt by Keats to treat himself through his poetry. Consumption was mainly affecting women, further amplifying the prevalent belief that women

133 Rousseau, J. (1841) Les Confessions. Charpentier, Paris. Accessed through:

<http://archive.org/stream/lesconfessionsde00rous#page/18/mode/2up> [Seen: 25.08.2013]

134 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 181.

135 Keats, J. (1958) The Letters of John Keats, 1814–1821. Ed. Hyder Edward Rollins. 2 vols. Harvard University Press, Cambridge. Page 139.

needed to be extremely moral. Keats's attempts to temper his poetry, which was often described as effeminate, portrayed Keats as an effeminate man. This effeminacy was reinforced by his depiction as a "broken lily"¹³⁶ in Shelley's Adonais. Indeed, it is through his physiology and
 620 circumstances that Keats caused Shelley to depict consumption as a romantic disease, even though Keats's infatuation with the tropics and death in Rome could have just as well furthered beliefs of consumption as a tropical disease. It is also important to note that nearly a quarter of the American population was affected by consumption, and it was therefore not limited to the lower-classes like the other tropical diseases. It may be that this romanticization of consumption
 625 presented a needed explanation for the susceptibility of the upper-class to a disease that should have been limited to the lower-classes according to prevalent medical ideas at that time.

Poverty and Disease

The colonial era was a time that set a new standard for global mobility, the English were
 630 to be found in all corners of the world. It was these men that came into the most intimate contact with tropical diseases. The caveat here is however that these travellers were seldom from the upper-classes. In most cases it wasn't the famous poets or novelists who travelled into the inner-most jungles. The colonial era was a time of empire, a time of militarization, a time of soldiers travelling across the globe. Indeed, the people who were most exposed to tropical
 635 diseases were soldiers, as James Martin states "The worst enemy to the soldier has, everywhere and at all times, been disease."¹³⁷. These were in most cases poor illiterate men, picked off the

136 Shelly, P. (1953, ori. 1821) *Adonais*. English Romantic Poetry and Prose (Ed. Noyes, R.). Oxford University Press, Oxford. Page 1077.

137 Martin, J. (1856) The Influence of Tropical Climates on European Constitutions, Including Practical

street and subsequently enlisted and sent to their deaths¹³⁸. It is this fact that they were uneducated and that they often died quickly after their enlisting, which explains why very few accounts of their disease experiences exist in writing. Gary Nash states that as the poorest members of society, they “are perhaps the most elusive social group in early American history because they moved from port to port with far greater frequency than other urban dwellers [and] died young...”¹³⁹. In addition to their own inability to keep record of their numbers, no military records were kept for deaths by sickness in naval hospitals until 1779 and on military ships until 1811¹⁴⁰. Part of the reason why no records were kept was due to the inherent shame cast on the military for suffering such huge losses to an ‘invisible’ enemy instead of to enemy swords and guns, as John Campbell states in 1744 “I cannot prevail upon myself to enter into the particulars of a disaster which I heartily wish could be blotted out of the annals of this nation”¹⁴¹, this disaster of course being the annihilation of his troops due to disease. Indeed, in 1763, 133708 out of 184899 soldiers died through disease or desertion compared to only 1512 who died in combat¹⁴². Colonialism therefore provided the upper-class with a method of removing the poor from their sight, “War was an invaluable device for the removal of the idle, and hence dangerous, poor.”¹⁴³ as Douglas Hay observed.

Observations on the Nature and Treatment of the Diseases of Europeans on Their Return from Tropical Climates. Churchill, London. Page 35.

138 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 69.

139 Nash, G. (1979) The Urban Crucible: Social Change, Political Consciousness, and the Origins of the American Revolution. Harvard University Press, Cambridge. Page 16.

140 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 70.

141 Lloyd, C. and Coulter, J. (1961) Medicine and the Navy, 1200–1900. Vol. 3. 1714–1815. Livingstone, Edinburgh. Page 97.

142 Blane, G. (1965) “*On the Comparative Health of the British Navy, from the Year 1779 to the Year 1814, with Proposals for its Farther Improvement.*” The Health of Seamen: Selections from the Works of Dr. James Lind, Sir Gilbert Blane, and Dr. Thomas Trotter. Ed. Christopher Lloyd. Navy Records Society, London. Page 205.

143 Hay, D. (1982) “*War, Dearth, and Theft in the Eighteenth Century: The Record of the English Courts.*” Past and Present, Vol. 95, pp 117–160. Page 141.

While most of the soldiers were illiterate and couldn't write down their experiences, occasional journals were kept. One such journal is John Stedman's Narrative of a Five Years' Expedition against the Revolted Negroes of Surinam, telling a tale comparable to Joseph Conrad's Heart of Darkness¹⁴⁴. Stedman fits the description of the poor man, as he writes "I should never have engaged [in this war] had I known any other way to push my fortune"¹⁴⁵. It does not take long in his accounts before the first epidemic breaks out, as after three weeks the climate changed and Stedman states that "the smallest exercise and particularly excesses [are] of the most pernicious consequence."¹⁴⁶. This statement again exemplifies the belief at the time of both the climate and personal excesses being at the root of tropical diseases. Stedman however ends up developing a fever in spite of his precautions of not indulging in his passions and he writes at the time of his compatriots that "Five or six sailors now were buried every day."¹⁴⁷. Indeed, he writes it in such a nonchalant manner, reflecting what a common occurrence these deaths from disease were. 'There might be five or six nowadays, but it wouldn't be surprising if that number climbed even more' is the detached statement in Stedman's writing. The deaths by disease continue throughout the story, however the crew never engages in combat with enemy troops, a situation that Stedman describes plainly: "As for the Enemy...you may depend on not seeing one single Soul of them... but the Climate, the Climate will murder you all."¹⁴⁸. Later in the narrative, Stedman becomes the captain of a 400 man crew, all of whom

144 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 88.

145 Stedman, J. (1988) Narrative of a Five Years' Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 86.

146 Stedman, J. (1988) Narrative of a Five Years' Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 49.

147 Stedman, J. (1988) Narrative of a Five Years' Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 97.

148 Stedman, J. (1988) Narrative of a Five Years' Expedition against the Revolted Negroes of Surinam. Ed. Richard

suffer the same fate as the crew that Stedman had sailed with first, Stedman stating “I began now to be reconciled to putting my last Man under Ground, and to leap into the Grave after him myself.”¹⁴⁹.

The interesting consequence of Stedman’s narrative was its implications for the anti-slavery debate in the 1790s¹⁵⁰. Stedman’s narrative had shown the inhumane conditions in which soldiers had to live, including their high death tolls, rivalling and even exceeding those of slaves at the time, something that Stedman puts plainly into words: “[Soldiers are] actually being used worse than the negroes in this Scorching Climate”¹⁵¹. Indeed, Stedman’s narrative draws many parallels between military service and slavery, including a loss of freedom through service, the high mortality rate, and the loss of human rights. It is therefore a little surprising that Stedman was critical of abolitionists even though he had witnessed a situation similar to slavery himself, a stance he took due to his belief that both slavery and colonialization, including the high death rate, were somehow necessary, “...what happens in Africa, the same as what happens in Europe seems so perfectly necessary to me”¹⁵². His reasoning for this was that those who became soldiers would have been thieves if left on the streets, a belief that may be due to Stedman’s own past financial problems, “...who if not dies in this Way, would possibly have been obliged, to pick your pockets for a Subsistence...”¹⁵³. While Stedman’s views on slavery are controversial, the parallels that are drawn between slavery and military service influenced many minds at the

and Sally Price. Johns Hopkins University Press, Baltimore. Page 122.

149 Stedman, J. (1988) Narrative of a Five Years’ Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 154.

150 Bewell, A. (1999) Romanticism and Colonial Disease. Johns Hopkins University Press, London. Page 93.

151 Stedman, J. (1988) Narrative of a Five Years’ Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 97.

152 Stedman, J. (1988) Narrative of a Five Years’ Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 171.

153 Stedman, J. (1988) Narrative of a Five Years’ Expedition against the Revolted Negroes of Surinam. Ed. Richard and Sally Price. Johns Hopkins University Press, Baltimore. Page 171.

time. This includes William Blake, a strong anti-slavery advocate, who wrote that slavery and
690 military service were “bound back to back”¹⁵⁴ in 1793, five years after the publication of
Stedman’s narrative.

Stedman’s narrative is very interesting in the context of this study because of a variety of
factors. It shows the view of the lower-classes in terms of disease narratives, a perspective that
is often ignored. This perspective demonstrates clearly the destructive power of disease at the
695 time and to what extent it was part of the everyday life of the poor. In addition, it shows how the
diseases were interpreted scientifically by this group. The understanding was surprisingly
accurate in terms of scientific knowledge at the time, with Stedman knowing about the theory of
disease being linked to climate and to excesses. Indeed, this is quite surprising when taking into
account the fact that most of the soldiers were uneducated. Therefore, this scientific knowledge
700 must have been procured through hear-say. The description of the tropical diseases themselves
is however limited to fever, and the consequence is death. The view of disease was therefore
focussed on the understanding of the causes, and less on the outcome. Indeed, this again shows
to what extent these diseases were lethal: once somebody developed a fever, they were basically
doomed to die. Finally, Stedman’s narrative again portrays to what extent diseases were linked
705 to the lower-classes, other races, and poverty in this era. The reason why military service can
be linked so closely to slavery is partly due to their inhumane living conditions and high
mortality rate, both caused by disease. While slavery was for other races, military service was a
type of slavery for the poor white. Through shipping the soldiers to those areas where tropical
diseases were rampant, this class of people suddenly became very exposed to disease, further

154 Blake, W. (1965) The Poetry and Prose of William Blake. Ed. David Erdman. Doubleday, New York. Page 48.

710 fostering the belief of the poor being pestilential. The upper-class therefore not only believed that the lower-classes were diseased, but even enforced it to be this way by shipping the lower-class Englishmen to the tropics and the Africans to England, causing both groups to be exposed to novel diseases and die in this way. The upper-class created its own epidemiological reality.

715 Conclusion

It has been established that during the course of the colonial era, tropical diseases became more and more connected to the lower-class, as a way for the upper-class to mentally distance themselves from these foreign terrors. Indeed, the science of medical geography was the catalyst of this connection, giving scientific validity to the superstitions of the upper-class at the
720 time. Even with further research into the science of tropical disease, such as the discovery of the method of transmission of malaria, the popular belief of a geography of disease remained. This reluctance to adapt their scientific beliefs suggests that there was a certain 'use' in keeping those old-fashioned beliefs of climate-induced fever. The most obvious use of this medical geography was to separate the English pathology physically from that of the tropics, thus
725 representing England as 'healthy'. This scientifically endorsed separation enabled the upper-class to retain their beliefs of superiority, and indeed responsibility to cleanse the other parts of the world. Therefore the main role of medical geography besides its supposed medical relevancy was its use in promoting colonialism. The writings analysed in this study are therefore of interest in how they utilize this medical geography to criticise colonialism.

730 In Heart of Darkness, Joseph Conrad makes use of medical geography to criticise colonial rule through the duality of light and darkness, and by showing how the climate leads to insanity

in the colonialists, such as Kurtz. At the time of writing, the concept of medical geography had already fallen out of favour, and it is therefore used solely as a method of covering the critique of the actions of the English in the tropics. Indeed, if the concept of medical geography is ignored
735 while reading Heart of Darkness, the terrible crimes that the Europeans committed are very clear. In the novels by Paul D'Oyton, medical geography is again used as an argument for anti-colonialism, however on the basis of racism. In Chaire Noir and L'Amour et la Mort, tropical diseases are shown to be caused solely through the crossing of racial barriers. In the end, medical geography is even used as a way of criticizing social classes in the rewriting of Daisy
740 Miller, the very concept which medical geography supported originally. Indeed, this change in Daisy Miller is again only possible through the advances of science and medical geography having become obsolete. In Jane Eyre, Charlotte Bronte shows clearly how medical geography fails to present an accurate representation of diseases in the real world, as diseases are also present in England. Indeed, she therefore 'tropicalizes' the English landscape in an attempt to conform to
745 the scientific views of medical geography. This tropicalization of the English landscape is in itself an attack on the separation of the temperate zone from the tropical, showing that there is significant heterogeneity. Bronte links this heterogeneity to the distribution of wealth, with the poor being more affected by diseases. This argumentation in Jane Eyre was one of the many factors causing the National Health Act to be passed a year later, providing better working
750 conditions for the poor¹⁵⁵. This link between poverty and disease is particularly clear in the travel writings of soldiers who were amongst the poorest of society. In Stedman's writings, the devastating effect of tropical diseases is again demonstrated. The soldiers are depicted by

155 Bewell, A. (1996) *Jane Eyre and Victorian Medical Geography*. English Literary History, Vol.63, pp 773-808. Page 794.

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Stedman as a type of disposable slave. While the connection between poverty and disease became well-established in the minds of the populace, the reality was slightly different. Many upper-class people also suffered from diseases, including consumption. It is therefore intriguing how consumption came to be romanticised due to its prevalence. When it was impossible to ignore a disease by physically linking it to some other region, it suddenly became romanticised to save face. The story that is therefore created is that while medical geography was initially a scientific method of understanding disease, it came into misuse through fostering colonialist ideals about class distinctions. Indeed, it is only when the science behind the medical geography fell out of favour that it could be used to criticise all those aspects that it stood for originally.

It is therefore concluded that tropical diseases were intimately linked to all the aspects loathed by upper-class Victorian society, such as the poor, other races, and foreignness. Indeed, by labelling all diseases tropical and by limiting their infectiousness to the 'others', the upper-class essentially liberated itself from the threat that was apparent in this new surge of disease. It not only provided them with a method of becoming mentally immune to the diseases, but also with a new way of justifying their superiority to the others. Many areas in the world are deemed 'poor', and often it is very difficult for these areas to change this. Because of poverty, these areas have little access to the hygienic and medical necessities required to keep diseases at bay. The diseases then make it difficult for the populace to leave their social realm as sickness makes work harder and detracts potential investment. This creates a sort of vicious circle, in which poverty is linked with disease and disease is linked with poverty. Indeed, this vicious circle still continues today, with the highest disease mortality rates being in poor countries. This connection of poverty and disease therefore became both established and apparent due to

775 literature on tropical diseases. Therefore the picture that is painted is a grim one, with those
that are most affected by disease being those that can do the least about it. This picture is
however accurate and still relevant today, as malaria is now only limited to the poorest
countries. All the scientific textbooks state that malaria causes poverty in the countries affected
by it, but it may be more correct and poignant for them to state that poverty causes malaria in
780 the countries affected by it.

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