

‘Not in Glorious Battle Slain’: Disease and Death in the Royal Navy’s Western Squadron during
the Seven Years’ War

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ABSTRACT

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The Seven Years’ War represented a period of great mobilization of British sailors and soldiers. Not only did men need to be found to man the ships and garrison the forts in the Western Squadron and North America, but they also needed to be fed and kept healthy during the conflict. Due to poor living conditions aboard Royal Navy ships, expeditions to North America were met with disease that would drastically reduce the numbers of able seamen. This was compounded by demobilization that followed the War of the Austrian Succession, forcing the British forces to rely on impressment to augment their troop numbers. Though there was a concerted effort to take healthy men with seafaring knowledge, local magistrates and constabularies saw this as an opportunity to rid their towns of the unwanted, and the demands of manning an ever growing Navy forced the Admiralty to take the sick and infirm. British prisons during this time were rife with typhus and smallpox, and the guardships that the impressed men would travel to were also areas of infections. The Royal Navy vessels were typically overfilled with men, and the tight living conditions encouraged the diseases to spread, creating ships that were not a wartime asset, but a liability to arrive in friendly ports in North America. There, the infection would spread to the local population, causing continued manning problems for the British during the conflict, and strained relations between the Admiralty and local governors. The infected troops limited British military effectiveness, and threatened the success of operations, as seen in the delay of the siege of Louisbourg in 1757, and the defeat of the British forces outside Quebec City in 1760. The experience with disease within a wartime context allowed Britain’s emerging medical class to publish important research, leading to positive changes to shipboard hygiene and medicine by the end of the eighteenth century.

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A Note on Language

Throughout this dissertation, to avoid confusion and unless otherwise specified, the terms *colonial* and *provincial* will be used interchangeably to refer to the non-indigenous peoples who lived in North America during the mid-eighteenth century. The author felt that using these contemporary terms, which frequently appeared in in-period letters, publications and pamphlets, would simplify a nebulous and tangled web of definitions and origins, given current historiographical debates about settler identity¹. It would be impossible to accurately qualify and quantify the identity of each group that assisted the British forces in North America, and given the contentiousness of British identity that will be elaborated below, the catch-all term of *British* is inadequate.

¹ See Nicholas Rogers' "From Vernon to Wolfe: Empire and Identity in the British Atlantic World of the Mid-Eighteenth Century" in *The Culture of the Seven Years' War: Empire, Identity and the Arts in the Eighteenth-Century Atlantic World*, F. De Bruyn, ed. (Toronto: University of Toronto Press, 2014), 25-53, L. Colley, *Britons: Forging the Nation, 1707-1837* (Yale University Press, 2005), and L. Colley, "Whose nation? Class and national consciousness in Britain 1750-1830," *Past & Present*, 113 (1986):97.

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INTRODUCTION

THE INTERSECTIONS OF MOBILIZATION, DISEASE AND WAR DURING MID-EIGHTEENTH CENTURY CONFLICT

The number of seamen in time of war, who died of shipwreck, capture, famine, fire or sword, are but inconsiderable, in respect of such as are destroyed by the ship diseases. – James Lind²

In 1726 a young lieutenant named Edward Boscawen gained the dubious honour of being one of the few British officers left alive following a disastrous Royal Navy blockade of the Spanish port of Porto Bello in what is now Panama. Of a complement of nearly 5,000 men, only 700 returned home. The vessel on which Boscawen served, the 60-gun *Superb*, was flagship of the fleet and bearer of Vice-Admiral Francis Hosier, whose name quickly became infamous in the port towns of Britain.³ One section from Richard Glover’s “Admiral Hosier’s Ghost” an 85-verse ballad from 1739, reads:

*Think what thousands fell in vain
Wasted with disease and anguish,
Not in glorious battle slain.⁴*

It was neither shot, nor cannon, that killed both these sailors and Admiral Hosier’s reputation, but disease. Yellow fever, typhus and scurvy destroyed the British expedition. Thirty years later, Boscawen, now Vice-Admiral Edward Boscawen, was sent to North America with a fleet

² James Lind, *An Essay on the Most Effectual Means of Preserving the Health of Seamen in the Royal Navy, and a Dissertation on Fevers and Infection* (London: n.p. 1779), 27.

³ For more on the life of Vice Admiral Hosier, see J. K. Laughton, ‘Hosier, Francis (bap. 1673, d. 1727)’, rev. J. D. Davies, *Oxford Dictionary of National Biography* (Oxford University Press, 2004).

⁴ Richard Glover, Ballad of Admiral Hosier’s Ghost, in *The Book of Georgian Verse*, William Stanley Braithwaite, ed. (New York: Bretano. 1909). For more on Richard Glover, see Paul Baines, ‘Glover, Richard (1712–1785)’, *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

carrying 9,500 men to intercept French convoys carrying reinforcements and supplies to Louisbourg and Quebec City, in the early days of what became the Seven Years' War. The traditional historiography of the Seven Years' War has sadly underplayed Boscawen's early performance, typically stating that he failed in this task, dallied about Halifax, and then returned to England⁵. Such assessments fail to take into consideration the medical condition of his fleet. In June of 1755, Boscawen reported that fever was surging through his ships and early signs of what we know as scurvy were settling in. Typhus was carried throughout the ships, as evidenced in a pamphlet stating that on Boscawen's voyage almost 2,000 sailors died "...of a Putrid or Gaol Fever, which it is presumed, was in a great Measure occasioned by the moist Vapour, and confined Air between Decks."⁶ A dozen empty ships were left in Halifax, their surviving crew returning to the English port of Spithead. The official cause was not easily established, though Admiral Hawke laid the blame on sickness caused by water in newly-constructed and uncured casks.⁷ His name having avoided the stain of a grim ballad, Boscawen survived all journeys, was promoted to admiral, and returned to lay siege to Louisbourg in 1758. On his triumphant return, Admiral Edward Boscawen was made a Privy Councillor by the king in recognition of his continued service as a member of the Board of Admiralty and commander-in-chief. Less than three years later, aged 49, he was hurried ashore to die at home of a fever – likely typhus – contracted on one of his ships. He was buried near his birthplace in Cornwall.⁸

⁵ Fred Anderson, *Crucible of War: The Seven Years' War and the Fate of Empire in British North America* (New York: Knopf, 2000), 378.

⁶ John Duffy, "The Passage to the Colonies," *The Mississippi Valley Historical Review*, no. 38 (1951), 27.

⁷ Stephen Gradish, *Manning of the British Navy During the Seven Years' War* (London: Royal Historical Society, 1980), 32.

⁸ Clive Wilkinson, 'Boscawen, Edward (1711–1761)' *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

Admiral Boscawen's experience reveals that eighteenth century medical technologies were no match for diseases such as typhus and smallpox that stalked the maritime world. European medicine in the eighteenth century developed an innovative focus on public health. Embracing Enlightenment empiricist ideals, physicians and surgeons began to attend to the health of the general population, armed with the belief that they could and should reform systems and institutions. Recent historical research has traced how naval and military institutions contributed to the development of modern clinical medicine.⁹ With large groups of men under military command, and foreign environments offering the opportunity for empirical experimentation, warfare was central to the development of European medical practice in the eighteenth century. The Seven Years' War provides an opportunity to trace not only the transmission of disease in colonial contexts, but also the steps taken to combat the disease. The Duke of Wellington remarked that the history of British warfare was always "...long and ruinous in expense because we were unable to prepare the operations which must have brought them to a close, for years after they were commenced."¹⁰ The beginning of the Seven Years' War provided just those logistical problems for the Royal Navy. Britain had recently undergone a period of demobilization following the War of the Austrian Succession.¹¹ As rumours of war circulated among the Admiralty, there was a need to build and outfit ships quickly, and also to find men to crew them. Between the start of hostilities in 1754 and the surrender of the French in Canada in

⁹ See Erica Charters, *Disease War, and the Imperial State* (Chicago: University of Chicago Press, 2014), 143-171. 'The Intention Is Certainly Noble': The Western Squadron, Medical Trials and the Sick and Hurt Board during the Seven Years War, 1765-63." *Health and Medicine at Sea, 1700-1900*: 19-37. Patricia Kathleen Crimmin. "The sick and hurt board and the health of seamen C. 1700-1806." *Journal for Maritime Research* 1, no. 1 (1999): 48-65, Mark Harrison, *Medicine in an age of commerce and empire: Britain and its tropical colonies, 1660-1830* (Oxford: Oxford University Press, 2010), and James D. Alsop, "Warfare and the Creation of British Imperial Medicine, 1600-1800." *In British Military and Naval Medicine, 1600-1830*, 23-50.

¹⁰ Gradish, *Manning of the British Navy During the Seven Years' War*, 29.

¹¹ See Reed Browning's *The War of the Austrian Succession* (Stroud: Sutton Publishing, 1994), and Douglas Hay's. "War, dearth and theft in the eighteenth century: the record of the English courts." (*Past & Present*, 95, 1982): 117-160.

1760, British strategy focused on control of North American waters. Major sustained naval commitments in Europe hampered the mobility of the French fleet, preventing them from reinforcing their colonial possessions. As a direct response to the intensified Anglo-French rivalry in North America, in November 1754, the British Parliament took the first step to expand the nation's armed forces by voting additional supplies to increase the strength of the army and navy. Mobilization of the navy did not actually begin until 20 January 1755, when the Cabinet ordered into commission seventeen ships of the line for immediate service in North American waters.¹² Anticipating the order, four days earlier the Admiralty had requested permission to begin recruiting, and on the 23rd of January, the Privy Council issued two proclamations. One authorized the payment of bounties to volunteers, and the other authorized the Admiralty to begin using the press gangs.

There is no clear historical consensus on how many men were pressed into the service, or how much nautical knowledge they possessed. Though the impress service was given orders to select healthy men of seafaring experience, the needs of the Admiralty drove press-gangs to pick up the poor and sick. Towns and parishes of Britain took the opportunity to rid themselves of social liabilities, flooding the impress service at times with hundreds of vagrants and the infirm.¹³ While the Admiralty sent the obviously sick and wounded away, some who were infected but showed no symptoms would still be posted to warships. Both the well and the unwell were often quartered in guardships, heavily-manned vessels that were inevitably infected with communicable disease.¹⁴ Aboard their warships bound for North America, sailors were encapsulated in what N.A.M. Rodgers called "the wooden world", with nearly no isolation from

¹² Gradish, *Manning of the British Navy during the Seven Years' War*, 71.

¹³ *Ibid*, 60.

¹⁴ James Lind, *An Essay on the Most Effectual Means of Preserving the Health of Seamen in the Royal Navy, and a Dissertation on Fevers and Infection, Together with Observations on the Jail Distemper* (London: n.p. 1774), 5.

the sick and little access to healthy food.¹⁵ In the early stages of the Seven Years' War, the ships dispatched to North America were too small for healthy liveable conditions. Though there were a host of diseases afflicting the ships, the most devastating and widespread were typhus, smallpox, and scurvy. Once in North America, the ships became idle in port because they had inadequate healthy crew. The diseased sailors and soldiers would disperse amongst the general population, spreading disease to the locals.¹⁶ The cold weather caused men to huddle together for warmth, spreading both typhus and smallpox from dirty sheets and clothes, and the lack of supplies caused scurvy to set in during the cold North Atlantic winters. Because of its huge contribution to chronic understaffing, the single factor of shipboard disease severely impeded the effectiveness and range of the European fleets. During the Seven Years' War, several attacks on the French fortress of Louisbourg and on Quebec City were postponed because not enough healthy sailors were available.¹⁷ The British garrison at Quebec suffered a devastating incidence of scurvy in the winter of 1759-1760, contributing to their defeat at the battle of Sainte-Foy. The spread of disease from the naval ships and the work of press-gangs in the colonies strained imperial relations: colonial officials complained about British demands and resisted local recruitment, while British officials complained about the provincials' lack of military expertise and lack of vigour.¹⁸

This thesis will emphasize the importance that the British Admiralty placed upon manning the Royal Navy during the Seven Years' War, and by extension, the importance and

¹⁵ N.A.M. Rodgers, *The Wooden World, An Anatomy of the Georgian Navy* (New York: Norton and Company, 1996).

¹⁶ Charters, *Disease, War, Imperial State*, 18.

¹⁷ See Allen Marble's *Surgeons, Smallpox and the Poor: A History of Medicine and Social Conditions in Nova Scotia, 1749-1799* (Toronto: McGill-Queens University Press, 1997), 55, and Erica Charters' "Disease, Wilderness Warfare, and Imperial Relations: The Battle for Quebec, 1759—1760." *War in History* 16, no. 1 (2009): 1-24.

¹⁸ Erica Charters, "Making bodies modern: race, medicine and the colonial soldier in the mid-eighteenth century." *Patterns of Prejudice* 46, no. 3-4 (2012): 214-231.

value of a healthy sailor. It emphasizes the importance of not only mobilizing men, but also conserving the health of those men. It argues that fear of insufficient crew to operate an expensive ship of the line caused the Royal Navy to not only overfill crew capacity, but also impress landsmen with little to no experience at sea. Further, it argues that these landsmen brought with them deadly contagious diseases, and the ship-board conditions caused the infection to spread throughout the fleet, eventually infecting colonial forces in North America, threatening British military successes. In addition, it will show that the Admiralty and British Government took these medical matters seriously, using significant money and personnel to seek solutions that were sensible within the context of the time, leading to medical breakthroughs in the latter half of the eighteenth century. The first chapter of this dissertation seeks to explain the mechanism and importance of impressment in eighteenth century Britain, and how diseased Britons were placed onto ships destined to North America during Seven Years' War. It argues that the British viewed impressment as a necessary evil, though some townships regarded it as a way to rid their parishes of the unwanted, including the sick and infirm. The Admiralty refused the demonstrably sick and diseased, but letters from the *Gentleman's Magazine*, a periodical that frequently published letters from ship surgeons and officers, demonstrate that some impressed Britons were indeed sick with contagions such as smallpox and typhus. This is supported by journals and publications from Royal Navy surgeons and physicians, such as Gilbert Blane and James Lind, who argue that the guardships, in which the impressed men were originally quartered, were vectors for disease. It additionally explains how typhus and smallpox could be contracted by eighteenth century Britons, particularly the poor and recently imprisoned - two groups that were well represented in the Royal Navy, according to in-period letters and publications.

The second chapter begins where the first ends, with the Royal Navy ships departing Britain for North America. It focuses on shipboard health and hygiene, and efforts by shipboard surgeons and the Admiral Board to improve both. It contends that despite the differences aboard both British and French ships, and encouraged by enlightenment ideals, European surgeons and physicians freely shared ideas with each other. Disease was seen as something knowable and curable by a growing medical class, and they explored, considered and wrote about the issue from a perspective of state service. The Seven Years' War was a period of great medical advancement in the Royal Navy, with ships eventually increasing in size, lowering crew capacity, and improving hygiene and cleanliness. By using journals and publications from surgeons and physicians such as James Lind and Gilbert Blane, and then examining the Royal Navy's implementation of the proposed recommendations, the chapter reveals the importance placed on healthy seamen. Sailors remained the principal subjects of experimentation, as they were plentiful, and viewed as the intended beneficiaries of any improvement.

The final chapter begins with the Royal Navy ships arriving in North America. After explaining the spread of disease to provincials from sailors disembarking in Halifax, the chapter traces the connection of diseased sailors and colonial soldiers to British military defeats and wartime logistical failures. Using the journals of British military figures such as Jeffrey Amherst, James Murray, and John Knox, and the medical publications of James Lind, the chapter reveals an acute awareness in the British military of the medical dangers of colonial warfare, where troop transportation was precarious, and procuring supplies, particularly during the cold winter months, was near impossible. This is exemplified in the examples of the first cancelled siege of Louisbourg, which caused the dismissal of the then-Commanders of the British forces, and also the Battle of Saint-Foy outside of Quebec City in 1760, leading to a disastrous and costly defeat

of the British garrison. The chapter also highlights both colonial susceptibility to European diseases, and also colonial resistance to the practice of smallpox inoculation, underlining growing tensions between the North American colonies, and the authorities in London.

Illness was ubiquitous aboard ships in this period, but there has yet to be an in-depth contextualization and regional analysis of impressment and shipboard health connected to the British dominance of the North Atlantic coast. This study intersects with numerous historiographical themes: imperial and colonial; naval and medical; and national identity and power. Some of these fields are more voluminous than others, with the most pertinent and important references listed below, and greater length given to themes discussed in the dissertation. Geoffrey L. Hudson begins his anthology, *British Military and Naval Medicine, 1600-1830*, with a quotation from Dr. Roger Cooter, who lamented that “few topics in the history of medicine have been so poorly served as the relations between medicine and war” and that “serious research in this field has hardly begun.”¹⁹ This is especially obvious in an examination of British naval and colonial medicine,²⁰ a field barely touched upon in the wide array of scholarship on the British Empire.

A guiding question in British imperial studies asks how a small country, with a small population in comparison to that of her neighbours, was able to not only meet but surpass the expansionist and martial ambitions of those neighbours. By the eighteenth century, Britain was firmly established as a maritime power. Skilled seamen were needed to exert influence across Europe and the expanding colonies. In competing with the larger populations of other European powers such as France and Spain, Britain required an element of self-sustainability in its most

¹⁹ Geoffrey Hudson, ed. *British Military and Naval Medicine* (Amsterdam: Rodopi, 2007), 7.

²⁰ For links between colonial and naval medicine, see P. Chakrabarti's *Materials and Medicine: Trade, Conquest and Therapeutics in the Eighteenth Century* (Manchester: Manchester University Press, 2010), 19-53, and L. Colley's *Captives: Britain, Empire and the World, 1600-1850* (London: Jonathan Cape, 2002), 137-152.

precious resource - manpower. Moreover, because of the unique nature of the British parliamentary system, there was a notion of accountability towards the British state, idealistically to please the constituents of the boroughs, though more realistically to ensure that the disease-ridden complements of ships did not become tools of partisan politics as an example of inefficiency and waste by the current governing powers.²¹ Though early literature on the British navy and on medical innovations is primarily a study in military and diplomatic history, in the last ten years a new trend in the scholarship has emerged. Exciting new works have been recently published with a focus on the intersection of scientific and social history.²² The emerging trend is a holistic approach, incorporating the impacts of political and administrative change while also adapting new trends in social and medical history, exploring the dynamic and personal levels of engagement of surgeons, physicians, and politicians, and their bearing on the common sailor and soldier. This historiography charts the overall course of shipboard and military medicine to its present state, and explores the theme of health welfare for all of the soldiery as it emerged from both local actors and state-centred initiatives.

In the 1890s, pioneering scholars began an extensive consideration of naval history in books, articles, and documents. Scholars such as Julian Corbett perceived that Britain's status as a world power hinged on her naval might and influence.²³ The creation of powerful navies was seen as a matter of national and international significance as the technological and destructive

²¹ Rogers, *Wooden World*, 328.

²² Though the works of some authors such as Erica Charters, Patricia Crimmin and Geoffrey Hudson will be elaborated below, for a further historiography of recent publications on the Royal Navy, and the historiographical shifts within, see N.A.M. Roger's "Recent Work in British Naval History, 1750-1815" in *The Historical Journal* no. 51 (2008), 741-751.

²³ Robin Winks, ed. *The Oxford History of the British Empire: Volume V: Historiography* (Oxford: Oxford University Press: 1997), 328. Barry Gough highlights a few key texts, such as Julian Corbett's *Drake and the Tudor Navy, With a History on the Rise of England as a Maritime Power* (London: Longmans, Green and co, 1898), and *England and the Seven Years' War*, 2 vol. (London: Greenhill Books, 1922) with additional reading in L. Cleaver's "The Pen Behind the Fleet: The Influence of Sir Julian Sattford Corbett on British Naval Development, 1898-1918", *Comparative Strategy*, 16 (1995), 45-57.

power of modern ships crewed by knowledgeable sailors and officers was driven home by multiple contemporary demonstrations of naval might, such as the Battle of Tsushima in the Russo-Japanese War, and the Battle of Jutland in the First World War²⁴. These modern engagements revealed that powerful navies were important not only for colonial expansion and maintenance, but also to maintain a floating presence against other world powers. In Britain, numerous federal institutions were created to match the popularity of ships in academic, political, and martial spheres.²⁵

The connection of sea power to control of empire in a British context first emerged in the late nineteenth century with naval historian Alfred Thayer Mahan. In the volumes of his 1890 magnum opus, *The Influence of Sea Power Upon History: 1660–1783*, Mahan argued that British national power rested on seaborne trade and communication, supported by fleets, naval bases, and colonies across the world²⁶. Until the latter half of the twentieth century, the primary focus of the British navy for historians was on heroes, usually Elizabethan, perceived to have made maritime contributions, such as Sir John Hawkins and Martin Frobisher, as well as on figures who would resonate among a popular audience, such as the dashing privateer Sir Francis Drake. Following Mahan, Sir Julian Corbett linked strategic naval requirements to imperial expansion. In *England in the Mediterranean: A Study of the Rise and Influence of British Power within the Straits, 1603-1713*, he described a shift toward more empirical analysis of the strategic and logistical frameworks surrounding the British Navy.

²⁴ Ibid, 329.

²⁵ The Royal Colonial Institute focused extensively on overseas issues in imperial politics, while the Royal United Service Institution chiefly concerned itself with protection of seaborne trade. The Navy Records Society published numerous documents on ship-borne experiences, encouraging the study of naval matters.

²⁶ Alfred Thayer Mahan, *The Influence of Sea Power Upon History: 1660-1783* (Boston: Little, Brown and Company, 1890).

Gerald Graham is renowned for his exploration of the maritime connections in imperial history. In two books of lectures, *The Politics of Naval Supremacy: Studies in Maritime Ascendancy* and *Tides of Empire: Discursions on the Expansion of Britain Overseas*, Graham traces interconnected themes of maritime sea power and the expansion of empire, particularly in the context of British North America²⁷. Though Graham was never officially a disciple of Lewis Namier, he was very sceptical of Whig history, calling it ‘fraud’²⁸ and advocating scholarly pursuit through intense document analysis. By the mid-20th century, a broader approach towards naval history emerged, culminating in Paul Kennedy’s 1976 book *The Rise and Fall of British Naval Mastery*²⁹, which incorporated elements of both Mahan and Graham. Graham’s themes were followed by Barry Gough, who continued themes of the British navy in North Atlantic waters in his 1971 book *The Royal Navy and the Northwest Coast of North America, 1810-1914: A Study of British Maritime Ascendancy*.³⁰ Gough placed himself directly in the centre of post-imperialist thought, which became popular in the 1970s, in Canadian scholarship and in literature on the British navy as a force used for policing. In his 1980 publication *Distant Dominion*, he examines the relationship of global commerce to naval expansion and exploration, while his 1984 book *Gunboat Frontier* focuses on the west coast of British Columbia in the nineteenth century and on British naval power structures in relation to indigenous populations. Echoing Geoffrey Hudson, Gough states that the prospect of connecting naval history to the broader themes of politics and empire is a ‘daunting one’.³¹ He argues that above all, traditional naval historians love to write about naval battles and heroic figures standing bravely on deck with

²⁷ Graham’s early attentions were focused on Hovenden Walker, the commander of a British expeditionary force seeking to claim Quebec. For more, see Graham’s *Tides of Empire: Discursions on the Expansion of Britain Overseas* (Montreal: McGill University Press, 1972).

²⁸ *Oxford History*, Vol V, 333.

²⁹ Paul Kennedy, *The Rise and Fall of British Naval Mastery* (Humanity Books, 1976).

³⁰ Barry Gough, *The Royal Navy and the Northwest Coast of North America, 1810-1914: A Study of British Maritime Ascendancy* (University of British Columbia Press, 1971).

³¹ *Oxford History*, Volume V., 340.

shrapnel hurtling over their shoulders. He writes that incorporating naval themes with other aspects offers new possibilities in studying societies, systems, and states.³²

John Keevil, Christopher Lloyd and Jack Coulter's *Medicine and the Navy*, originally a massive multi-volume publication in 1963, attended primarily to administration, medical personnel, and treatments.³³ Compared to that gathered by other European powers, early 17th century British medical information is sparse. Most scholarship on military medicine comes from French and Spanish naval sources, and Germanic land-based military sources. Hudson proposes that the reason for this lack of British medical military information in record form is that the Hanoverian British army was not organized and centralized as its European counterparts.³⁴ He states that there was no equivalent bureaucracy with the same level of cohesion as those in France, Prussia, Austria and Spain; the British army was primarily 'hand-to-mouth', making early research difficult at best.³⁵ Prior to 1680, there were only two main texts detailing naval medicine on an imperial scale. The main text for much of the 1600s, *The Surgeon's Mate*, had been published in 1617, and despite being republished with some new edition formats, remained unchanged for most of the century. There are some serious problems with this book, even if one ignores modern medical knowledge and practices. First, though it was a book on naval medicine, its author, military surgeon John Woodall, was never employed at sea: every conflict in which he served was on land in continental Europe. It is posited by some naval historians such as Geoffrey Hudson that there was no significant interest in themes of naval and imperial medicine in the public or private markets of that era. Compounding this difficulty is the inaccessibility of the

³² Ibid.

³³ Hudson, 7. Christopher Lloyd's 1965 book, *The Health of Seamen*, provides a great deal of sources from well-known ship surgeons and physicians, such as James Lind, Gilbert Blane, and Thomas Trotter.

³⁴ Ibid, 9.

³⁵ See Jeremy Black's "British Foreign Policy and the War of the Austrian Succession, 1740-48". *Canadian Journal of History*, no. 21 (1986), 313-332; and Reed Browning's *The War of the Austrian Succession* (London: Sutton Publishing, 1994).

records and estate of Sir John Pringle, who as President of the Royal Society from 1772 to 1778 and Physician General to the Army, was arguably the most important figure of medical transformation in Georgian Britain. Upon his death, he bequeathed his extensive records and files to the Royal College of Physicians of Edinburgh, with the condition that they should never be published.³⁶ The college continues to uphold that agreement. In general, the wholesale failure to create a literature on maritime health in this period of British history has been commented on, but never fully explained.

Beginning in the early eighteenth century, there began to be a wide publication on and interest in imperial and naval health. With emerging wars, there was an interest in applicable, empirical remedies that would return men to service as efficiently and cheaply as possible. One naval surgeon, John Atkins, said, "...for the common and general parts of surgery, I know no better school to improve in than the navy in times of war. Accidents are frequent, and the industrious illustrate practice by their cures."³⁷ Medicine, therefore, developed within the boundaries set by British medical authorities, and the principal topics selected for study were scurvy, fresh water, tropical fevers, dysentery, and venereal disease. Maritime medicine evolved into a broader imperial medicine. The literature emerging at this time within the context of war, state, and service had distinct characteristics. To say it was state-centred is an understatement: it was overwhelmingly focused upon the demands of the state and conceptualized entirely around war, with little attention paid to commerce, immigration, or population vitality. In this capacity, imperial medicine was focused upon the European body, but a specific European body: a young adult male, characterized as temperamentally childlike and in need of guidance. Prior to 1800,

³⁶ J. Wallace, 'Blane, Sir Gilbert, first baronet (1749–1834)', *Oxford Dictionary of National Biography* (Oxford University Press, 2004).

³⁷ J.D. Aslop, "Warfare and the Creation of British Imperial Medicine", 1600-800, in *British Military and Naval Medicine*, Geoffrey Hudson, ed, 31.

references to women are virtually non-existent. There are only a few scattered references, such as that women were apparently less prone to sea-sickness, and were less likely to contract and die from yellow fever, but were more inclined to be hysterical in the tropics. Those who are not Europeans, such as Africans, are given almost no attention, as it was believed that their bodies were more adaptable to dramatic climate changes, and were naturally resistant to disease.

Lloyd and Coutler's work influenced later generations of naval historians, with N.A.M. Rodger's *The Wooden World, An Anatomy of the Georgian Navy*³⁸ and Laurence Brockliss, John Cardwell, and Michael Moss's *Naval Medicine and the Battle of Trafalgar*³⁹ drawing upon hundreds of records of army and naval surgeons, in their analyses of the nature of seaborne medical services such as education, training, and work. These works provide a synthesis of older and recent historiographies, focusing on political implications of the navy and on great figures and heroes, but also incorporating new themes with a focus on the common sailor and soldier. Rodger's *The Wooden World* devotes only a third of its pages to commissioned officers and the politics of the navy in Britain,⁴⁰ while the rest contains detailed analysis of the demographic makeup of the crew at large. Rodger examines the ship as a self-contained unit, going into searching detail on every aspect of life at sea. From his text, new themes to the scholarship emerge. First, no two ships were alike, as each was a microcosm of the sailors and officers aboard. Unique regional qualities would infuse the character of the crew, a feature that makes

³⁸ N.A.M. Rodgers, *The Wooden World, An Anatomy of the Georgian Navy* (New York: Norton and Company, 1996).

³⁹ Laurence Brockliss, John. Cardwell, Michael. Moss. *Naval Medicine and the Battle of Trafalgar* (Oxford: Oxford University Press, 2008).

⁴⁰ Though secondary to the purposes of this historiography, it should be noted that Rodger spends a great deal of time contextualizing Patronage, of which he states that popular textbooks reflect an anachronistic Victorian hatred. He views it as overall a positive system of management, and rhetorically asks the reader what possible other means could have worked in eighteenth century conditions. He explains that it worked because it was a balanced system of meritocracy and loyalty between the lower and higher officers, and he comments that no higher officer would want to have the reputation of rewarding incompetence.

specific observations about discipline and morale aboard ships in different theatres necessary but difficult at best. It is not surprising then, that Rodger devotes a great deal of time to the recruitment and impressment of sailors from ports, both local and colonial. Fully one third of all sailors were volunteer 'landsmen', with no applicable skills of which to speak, and because of depopulation of ships from combat, disease, and desertion, frequently landsmen were impressed against their will to serve. The fear of desertion lends itself well to Rodger's second main point, the treatment of sailors by officers and politicians. Rodger argues that of all seafaring occupations, including private merchant shipping and even privateering and piracy, a life in the Royal Navy was by far the most conducive to a sailor's being alive to once more stop on shore. Ultimately, if there was desertion, it was not to disperse into a town or city, but rather to move from one ship to another, where a captain of more even temperament could be found. Of the diet aboard ships, which we know now was sorely lacking in essential vitamins, Rodger argues that great effort, money, and time were spent on ensuring that there was ample food for sailors. The interest in the well-being of seamen is clear, Rodger argues, from efforts by the Admiralty in creating numerous large and well-funded naval offices dedicated to seeing to the needs of sailors.⁴¹ As well, numerous modern hospitals were erected in port cities, becoming a "prototype of a new regime in treating sick seamen, under professional care in buildings designed for the purpose".⁴²

⁴¹ For scholarship on the Admiralty Boards, see Patricia Kathleen Crimmin, "The sick and hurt board and the health of seamen C. 1700–1806." *Journal for Maritime Research*, no. 1 (1999): 48-65, Richard Garnier, "The office of the Sick and Hurt Board." (2002), Erica Charters, 'The Intention Is Certainly Noble': The Western Squadron, Medical Trials and the Sick and Hurt Board during the Seven Years War, 1765–63." *Health and Medicine at Sea, 1700–1900*: 19-37, and Barry Gough. "The Royal Navy and the British Empire." in *The Oxford History of the British Empire* Vol. 5 (1999): 327-41.

⁴² Rodger, 110. The hospital also had a twelve foot wall surrounding it to discourage desertion, somewhat weakening the idea of an all-caring state. Nothing is perfect.

In Disease, War, and the Imperial State, Erica Charters continues Rodger's contribution to an expanding literature on war, medicine, state and society.⁴³ Charters focuses on the Seven Years' War because of the multitude of European and non-European theatres it offers to the historian. The war exemplified eighteenth-century British experience of warfare: the main adversaries were Catholic European powers; fighting was simultaneously conducted in colonial theatres and on the European continent, with almost no fighting on actual British soil; Britain used foreign, typically German mercenaries; and victory depended frequently upon the Royal Navy. Yet the war itself was exceptional. Through the conflict, Britain was able to vastly expand its empire, securing lands in North America, the West Indies, Africa, India, and the Philippines. Britain emerged from the conflict as the greatest military and imperial power of the age.⁴⁴ Although military historians have generally not paid much attention to the role of disease in war, those engaged in battle were well aware that disease killed far more men than did the enemy, and that disease could influence the outcome of a campaign. Wherever the campaign, land based warfare during this period was characterized by long sieges in which there were drawn-out stalemates outside fortified walls. After initial small skirmishes and artillery barrages, battle or surrender was only decided once one side had exhausted its provisions. Since sieges forced troops to crowd into small holdings with dwindling supplies, and no place to dispose of waste or the dead, siege warfare resulted in high rates of sickness. When facing combat in colonial environments, the British struggled not only with foreign climates and diseases specific to the

⁴³ Erica Charters, *Disease War, and the Imperial State* (Chicago: University of Chicago Press, 2014).

⁴⁴ On the fiscal-military state, see: J. Brewer, *The Sinews of Power: War, Money and the English State 1688-1783* (Cambridge, MA.: Harvard University Press, 1988). For revisions and critiques of his thesis, and in particular the interplay with identity and the navy, see L. Stone, ed., *An Imperial State at War: Britain from 1689 to 1815* (London: Routledge, 1994) and D. Cannadine, *Empire, the Sea and Global History: Britain's Maritime World, c. 1763 - c. 1840* (London: Palgrave Macmillian, 2007).

region,⁴⁵ but also with lack of traditional supplies and adequate supply routes, which forced local foraging and victualing. Following the victory at the Plains of Abraham in 1759, the British forces garrisoned during the winter months suffered from such high rates of scurvy that they were unable to defend against a French counterattack in the spring of 1760; out of an original force of 7,300, only 2,612 men were reported as fit for duty by the end of April 1760.⁴⁶

Charters argues that military historians have either ignored the role of disease in campaigns or dismissed its significance, by judging it by present-day standards. The standard military history of the British Military is Cantile's 1974 book *A History of the Army Medical Department*, which states that there was no attempt at preventative medical care.⁴⁷ Frey's 1981 publication *The British Soldier in America* also assumes a low level of medical care due to a "...reliance on an anachronous administrative system to supply its troops abroad."⁴⁸ Even recent publications such as Fred Anderson's *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754–1766*, only mentions scurvy in passing, and makes little to no mention of health care instituted to combat localized diseases.⁴⁹ Charters states that the

⁴⁵ In India, British officers were also concerned with preventing disorders, and especially disease, during the notoriously sickly wet season. With exposure to the rigours of campaigning, and with larger numbers of Europeans serving in India than ever before, such physical adaptation appeared more difficult to justify by the close of the war. For more, see "Adaptation and Hot Climates" in Charters' *Disease War, and the Imperial State*.

⁴⁶ Erica Charters, "The Caring Fiscal-Military State During the Seven Years War." *The Historical Journal* (2009) 921-941. In India, the same problems arose, but with even more severe troop shortages. Having to fight against both native Indian and French forces, with a longer troop delivery time (about four months), and with scurvy and other diseases reducing the numbers on board, commanding officers constantly requested more troops and sought to conserve whatever manpower was immediately available.

⁴⁷ Neil Cantile, *A History of the Army Medical Department* (London: Churchill Livingstone, 1974).

⁴⁸ Charters elaborates on this historiography further in "Disease, Wilderness Warfare, and Imperial Relations: The Battle for Quebec, 1759- 1760" *War in History*, (2009). Charters: "On specific medical details regarding the British Army see P.E. Kopperman, 'Medical Services in the British Army, 1742–1783', *Journal of the History of Medicine and Allied Sciences XXXIV* (1979), pp. 428–55, and 'The Cheapest Pay: Alcohol Abuse in the Eighteenth-Century British Army', *Journal of Military History LX* (1996), pp. 445–70. Standard military histories of the siege, such as A. Doughty, *The Siege of Quebec and the Battle of the Plains of Abraham* (Quebec, 1901), J.W. Fortescue, *A History of the British Army*, 13 vols (London, 1910–30), II, and J.S. Corbett, *England in the Seven Years' War: A Study in Combined Strategy* (London, 1907)".

⁴⁹ Fred Anderson, *Crucible of War: The Seven Years' War and the Fate of Empire in British North America* (New York: Knopf, 2000).

outcome of the conflict depended on the British state being able to care for its troops, and just as essentially, on having the public *perception* of caring about its troops. Manpower could not be bought, but “...needed to be nurtured in the long term through a demonstration that the British State cared about the welfare of its armies.”⁵⁰ At the practical level, disease among troops led to manpower shortages and hence likely defeat, especially during sieges and colonial campaigns.

Though she draws upon a cross-disciplinary scholarship, including John Brewer’s 1989 book *The Sinews of Power: War, Money and the English State, 1688-1784*, and the works of Patrick O’Brien, Peter Mathias, and Peter Dickson⁵¹, Charters is inherently critical of economic historians who place money as the primary need of state during war.⁵² According to some scholars such as Lawrence Stone, victory over Britain’s contemporaries was due not to “military prowess, technological innovation or diplomatic skill...” but rather to “...overwhelming financial superiority. At bottom, victory in war was a question of money, not men, since money could always be used to hire men and Europe was full of mercenaries willing to serve a reliable paymaster.”⁵³ Charters contests this in *Disease, War, and the Imperial State*, arguing that recruitment at home and abroad was influenced by the level of concern offered by government ministers and commanders in the field. The wider public also had practical reasons for caring about this issue: ill-fed, badly organized, and sick troops were less likely to prevail in combat. Finally, Charters argues, there was a moral dimension in that favourable depictions of military leaders in this period emphasized their humane care for the men in their charge.⁵⁴ These leaders

⁵⁰ Charters, “The Caring Fiscal-Military State During The Seven Years War, 1756-1763”, 921.

⁵¹ John Brewer, *Sinews of Power: War Money, and the English State, 1688-1784*; P. Mathias and P. K. O’Brien, ‘Taxation in Great Britain and France, 1715–1810’, *Journal of European Economic History*, 5 (1976), 601–50; P. G. M. Dickson, *The financial revolution in England: a study in the development of public credit, 1688–1756* (London, 1967), P. K. O’Brien, ‘The political economy of British taxation, 1660–1815’, *Economic History Review*, (1988), 1–32.

⁵² Erica Charters, “The caring fiscal-military state during the Seven Years War, 1756–1763”, 921.

⁵³ Lawrence Stone, *An Imperial State at War: Britain from 1689-1815* (London: Routledge, 1994), 6.

⁵⁴ Charters, *Disease, War, and the Imperial State*, 4.

recognized that disease festered in unhygienic environment with poor supplies, and subsequently spent a great deal of time and resources attempting to curb battlefield fatalities. The most common diseases of the army and navy were scurvy, typhus, and dysentery or diarrhoeal diseases, which arose when provisions were lacking, accommodation was inadequate, and when an initial outbreak was not quickly isolated and given sufficient attention.

Another key aspect of eighteenth century disease which Charters highlights is that of discipline: a prevailing medical thought was that Europeans did not need to adapt to new hostile environments if they instilled a sense of good discipline in their troops. Good discipline, which translates to abstaining from exotic foods (which may in fact have aided against some of the local diseases they were trying to avoid), alcohol, and sexual activity (which could transmit both venereal and non-venereal infections), also aided in distinguishing European troops from colonial forces.⁵⁵ Character and constitution were seen as important factors in warding off virulent diseases. Scurvy and smallpox were believed to affect colonials far more than British-born. Therein lays an apparent paradox: if ‘discipline’ was meant to protect the European soldier from disease, why would the undisciplined native and colonial population be resistant to it? Charters argues that the prevailing medical thought was that the natural resistances of the ‘beast like’ savages (and passed onto colonial troops via breeding and exposure) offered a different constitution, and that their poor discipline had nothing to do with their health at all, though it was certainly enough to justify their lower military status than European soldiers.⁵⁶ There was some truth in contemporary belief that British-born soldiers were more resistant to disease than their colonial cousins. As many soldiers would have been recruited from dense urban centres,

⁵⁵ Erica Charters, "Military medicine and the ethics of war: British colonial warfare during the Seven Years War (1756-63)." *Canadian Bulletin of Medical History/Bulletin canadien d'histoire de la médecine* 27 (2010): 273-298.

⁵⁶ Charters, "The Caring Fiscal-Military State During The Seven Years War, 1756-1763", 931.

exposure to crowd diseases such as smallpox would have left the survivors immune. Colonial troops did not have the population density to generate many such resistant individuals.⁵⁷ British troops were dependent on local civilians for provisioning and accommodation. Typically Europeans had higher expectations of welfare and good treatment in the armies of their mother country than indigenous populations may have received, though they fought side by side. Officers in North America would find desertion increasing dramatically during the harvest months as soldiers would leave to return home to a family farm. The need to protect local sources of recruitment by the promise of fair treatment was a further reason why British officials had to concern themselves with supplies and management of their men.

Another argument that appears in the transition between Rodger and Charters is the notion of the interconnectivity between health in the navy, and political manoeuvring in the British Parliament. A session as a Member of Parliament was an attractive venture for some naval officers, as they could carry out their term in absentia. In fact, frequently officers could be nominated, run a campaign, and then become elected all while they were at sea, and some even without their knowledge.⁵⁸ While Rodger begins this topic with a long section on parliamentary patronage, it is Charters who further relates it to creation of governing medical bodies. Those in high positions in the British government were also frequently in positions of prestige and power in the navy, such as Baron George Anson, Admiral of the Fleet during the Seven Years' War.⁵⁹ To say that Anson was keen on ships was an understatement. Despite long absences during his many global expeditions, Anson was responsible for numerous reforms, including expansion of

⁵⁷ For important texts on European disease spreading to areas of low population density, see Alfred Crosby's *The Columbian Exchange: Biological and Social Consequences of 1492*. (Greenwood Press: 1972), and for a text on more localized peoples, Allen Marble's *Surgeons, Smallpox and the Poor: A History of Medicine and Social Conditions in Nova Scotia, 1749-1799*.

⁵⁸ Rodger, *Wooden World*, 329.

⁵⁹ For more on Anson, see N. A. M. Rodger, 'Anson, George, Baron Anson (1697–1762)', *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

the admiralty sub-boards such as the health and sick board and the victualing board. Traditional histories state that with Parliaments filled with naval officers, pro-naval matters presented were given support and ultimately passed, resulting in expansions of the power and bureaucracy of the British navy.⁶⁰ Charters offers a more nuanced perspective: that death in battle was foreseeable and viewed as near-acceptable by sailors, citizens, and politicians, but disease was seen as both inglorious and avoidable. It led to continuous recruitment problems and caused friction among both the admiralty boards and local colonial governors, who were apprehensive of having potentially disease-laden ships dock at their ports. It was seen as a weakness of administration, something preventable if not for the incompetence of the state. Daniel Baugh identifies a group of Tory politicians termed 'blue-water advocates'⁶¹, who advocated for a policy that was essentially defensive on land and aggressive overseas, with the ultimate goal of enlarging commercial bases for England while reducing potential land-based combat. Criticism and commentary on the health and welfare of soldiers and sailors soon fell into the realm of partisan politics, where frequently-demanded inquiries would be used as tools to criticise other statesmen. Parliamentarians, politicians and academics began to be a focus in both the political climate and the academic sphere, on the 'common sailor', as many medical books published at this time were dedicated to the common soldiery.

Linda Colley and many others have made the case that as the century progressed, a "superimposed" British identity became more apparent and perhaps predominant over national identities of the English, Scottish, Welsh and even the Irish, as well as over stronger locality- and

⁶⁰ Rodger, *Wooden World*, 328.

⁶¹ Charters, *Disease, War, and Imperial State*, 112.

community-based identities.⁶² In his recent works on war and society in mid-eighteenth-century Britain, Stephen Conway contributes to these debates, positing that ships' complements "...acted as ethnic melting pots and can be regarded as truly British institutions." Before 1763, he believes that "...a unifying sense of Britishness made only slow and fitful progress towards capturing hearts and minds" and it was less evident than "...persistence of localism and the continuing appeal of older national loyalties."⁶³ Yet, the Royal Navy may not have been able to successfully build a sense of 'Britishness' as is portrayed in some scholarships. Identity could shift or blur when colonial seamen felt alienated or abused. The most important identity might be their place of origin, or a communal one based upon the ship in which they are serving, or even what watch or mess they serve upon that ship.⁶⁴

No matter how contemporaries understood themselves and their place in the community, all showed similar aversions and fears of disease and death, particularly those in the naval service during the Seven Years' War. History of disease and medicine is still relatively new. For most of the 20th century, writings on empire concentrated on political and economic issues. Eradication of disease, particularly in colonial contexts, was widely published about and

⁶² Colley's central works on this subject include: L. Colley, "Whose nation? Class and national consciousness in Britain 1750-1830," *Past & Present*, 113 (1986):97, *Britons: Forging the Nation, 1707-1837* (Yale University Press, 2005) "The Reach of the State, the Appeal of the Nation : Mass Arming and Political Culture in the Napoleonic Wars," in *An Imperial State at War : Britain from 1689 to 1815*, ed. Lawrence Stone (London: Routledge, 1993):165-84, Martin Hubley outlines important examples of historiographical debates on Britishness in his work "Desertion, Identity and the Experience of Authority in the North American Squadron of the Royal Navy. 1745-1812" (PhD, University of Ottawa, 2009).

⁶³ S. Conway, *War, State and Society in Mid-Eighteenth-Century Britain and Ireland* (Oxford: Oxford University Press, 2006), 216 and *The British Isles and the War of American Independence* (Oxford: Oxford University Press, 2000), 66-8, 86-8. Martin Hubley notes that in addition to its effects on identity, the demands of eighteenth-century warfare on Great Britain essentially led to a "Revolution in Military Affairs", a development of the fiscal-military state, with massive increases to the armed forces funded by an expanded central government. The extraordinary expansion of the navy at this time created immense stresses which resulted in overstraining the system of manning based on impressment and also fostered the problem of desertion. See Hubley, 23.

⁶⁴ See P. Linebaugh and M. Rediker's *The Many Headed Hydra: Sailors, Slaves, Commoners and the Hidden History of Revolutionary America* (Boston: Beacon Press, 2000), J. Lemisch's *Jack Tar vs. John Bull: The Role of New York's Merchant Seamen in Precipitating the Revolution* (New York: Garland Pub, 1997), and D. Vickers and V. Walsh's *Young Men and the Sea: Yankee Seafarers in the Age of Sail* (New Haven: Yale University Press, 2005).

celebrated as an imperial achievement. Michael Gelfand, a practicing physician in then-Rhodesia, produced over twenty books detailing the medical contribution of doctors across Africa, celebrating western medicine as a form of miraculous gift offered to indigenous peoples.⁶⁵ William McNeill and Alfred Crosby wrote of disease as a neglected but powerful cause of change, both local and foreign. In the later 1980s, cliometrics, or econometric history, was used to chart the path of disease across the globe. Though there was still a dichotomy between empirical and theoretical, the crossover between modes of studying history ensured that new questions to be asked in both academic spheres. As an example, in *Death by Migration* by Philip Curtin, an examination into the actions of military doctors reveals a great deal of medical progress and reduction of disease in early nineteenth century European colonies, though this facilitated imperial control rather than strengthening the colonies against it, by lowering the human cost for expensive excursions into hinterlands⁶⁶. Edward Higgs believes that many studies on the centralization and medicalization of the state underestimate and ignore the level of information-gathering undertaken at a local level, stating "...the processes which made up the state were decentralised down to parish level, and the authority of the central state was a resource that local elites could call upon to protect their own interests, which seemed increasingly threatened by social and economic change."⁶⁷

⁶⁵ Ibid, 278.

⁶⁶ Phillip Curtin, *Death By Migration* (Cambridge: Cambridge University Press, 1989).

⁶⁷ E. Higgs, *The Information State in England: The Central Collection of Information on Citizens since 1500* (New York: Palgrave Macmillan, 2004), 62.

Though the chief focus of this dissertation is on the transmission of disease, rather than on state care and hospitals,⁶⁸ it would be remiss not to mention the Foucauldian notion of biopower and biopolitics. In the opening of *Les Machines à Guérir*, Foucault writes that

The eighteenth century marks an important moment. Quantitatively, it saw the multiplication of doctors, the foundation of new hospitals, the opening of free health clinics, and, in a general fashion, an increased consumption of treatment in every class of society. Qualitatively, the education of doctors was more standardized; the relationship between doctors' practices and the development of medical knowledge was a little bit better defined; a little bit greater confidence was accorded to doctors' knowledge and effectiveness; thus there was also a diminution in the value that one attributes to traditional "cures." The doctor separated himself a little more clearly from other caregivers, and he began to occupy a more extensive and more valorized place within the social body.⁶⁹

He argues that there was an expectation of "community responsibility" in the "politics of health." The welfare of sailors, or rather, the appearance of the welfare of sailors was essential to the state, for a variety of reasons. Firstly, from a purely practical standpoint, ropes needed pulling and sails needed furling. Ships needed to be manned, and without a healthy complement they would be combat-ineffective, more of a maritime liability than an imperial asset. Secondly, as commented by Charters, though death in battle was foreseeable, disease was seen as preventable if not for the incompetence of the state.⁷⁰ Foucault discusses the place of medicine in the monitoring and administration of populations and their bodies, arguing that in the seventeenth and eighteenth centuries, the punitive power allowed to the sovereign was replaced by the disciplinary power of institutions. Coining the term "biopower", Foucault explains that the techniques of power focused on disciplining and controlling the human body. Foucault writes in

⁶⁸ For more on British medical advances during this era, see S. Lawrence's *Chartable Knowledge: Hospital Pupils and Practitioners in Eighteenth Century London* (Cambridge: Cambridge University Press, 2002) and Richard Drayton's entry "Science, Medicine, and the British Empire" in *The Oxford History of the British Empire: Volume V: Historiography*.

⁶⁹ Michel, Foucault, B. Barret-Kriegel, Anne Thalamy, François Beguin, and Bruno Fortier. *Les machines à guérir: aux origines de l'hôpital moderne* (n.p: Pierre Mardaga, 1979).

⁷⁰ For more on the intersections of the navy and politics, see N.A.M Rodger's "The Navy and Politics" in *The Wooden World*, 328-331.

Discipline and Punish: The Birth of the Prison, that “Medical supervision of diseases and contagions is inseparable from a whole series of controls: the military control over deserters, fiscal control over commodities, administrative control over remedies, rations, disappearances, cures, deaths, simulation.”⁷¹ In his lectures at the Collège de France and *The History of Sexuality*, Foucault argues that historically the rights to life and death have been largely influenced by a life-administering power, the “power to foster life or disallow it to the point of death”.⁷² This power over life manifests itself in two ways, the first centring on the individual body as a machine that must be monitored and disciplined, and the other focusing on the species body, with control over birth rate, mortality rate, level of fertility, and overall state of health. Thus, the modern state is concerned with managing the population “...through an entire series of interventions and regulatory controls: a biopolitics of the population”.⁷³ Foucault’s famous phrase “The Birth of the Clinic” is typically tied to eighteenth and nineteenth century France, and is characterized by its emphasis on powerful, state-run hospitals for research and teaching.

Differences between French and British medicine during this period will be described below, showing that Foucault’s discussions on medicine are better fitted to a French context than a British. The work of Roy Porter on the eighteenth-century medical world of England has encouraged scholars to see little of the state in British eighteenth-century medical science.⁷⁴ Even scholars who challenge and refine Porter’s approach tend to focus on the role of the marketplace

⁷¹ Michel Foucault, *Discipline and Punish: The Birth of the Prison*, p. 144. Brockliss and Jones’ 1997 book *The Medical World of Early Modern France* doubts the direction favoured by Foucault, arguing that colonial medicine was experimental and inclusive, and that the chief concerns of the time were preventative and environmental medicine.

⁷² Michel Foucault, *The History of Sexuality*, Vol 1 (New York: Vintage Books, 1990), 138.

⁷³ Ibid, 139.

⁷⁴ See Roy Porter and W.F. Bynum, eds, *William Hunter and the Eighteenth-Century Medical World* (Cambridge: Cambridge University Press, 1985), Roy Porter and Dorothy Porter, *Patients and Practitioners: Doctors and Doctoring in Eighteenth-Century England* (Stanford: Stanford University Press, 1989).

and charitable hospitals, rather than state institutions, in eighteenth-century British medicine.⁷⁵

The physical experience of colonial warfare makes clear that the disciplining of bodies was perhaps not only a manifestation of what would come to be defined as power relations and Foucauldian order, but also a practicality needed for health and survival. Today, the term “biopolitics” is used more and more frequently in scientific literature and journalistic texts, as a neutral notion or a general category, to point out the social and political implications of biotechnological interventions.⁷⁶

⁷⁵ Erica Charters, “Colonial Disease, Translation, and Enlightenment: Franco-British Medicine and the Seven Years’ War”, *The Culture of the Seven Years’ War: Empire, Identity and the Arts in the Eighteenth-Century Atlantic World*, F. De Bruyn, ed. (Toronto: University of Toronto Press, 2014), 73.

⁷⁶ For further work on biopower and biopolitics, see Timothy Campbell and Adam Sitze’s collection *Biopolitics: A Reader* (Durham: Duke University Press Books, 2013). For other contemporary views of biopower, see P. Patton’s “Agamben and Foucault on biopower and biopolitics” in *Giorgio Agamben: Sovereignty and Life* (Stanford: Stanford University Press, 2007), and Mona Lilja’s “Sovereign power, disciplinary power and biopower: resisting what power with what resistance?”, *Journal of Political Power*, Vol 7 (2014).

ONE

‘IDLE AND REPROBRATE VERMIN’: IMPRESSED SAILORS AND SICKNESS IN EIGHTEENTH CENTURY BRITAIN

*...In a man-of-war you have the collected filth of gaols; condemned criminals have the alternative of hanging or of entering on board. – Lieutenant Edward Thompson*⁷⁷

The Royal Navy could not rely on ‘market forces’ to man its crews. At the turn of the eighteenth century, the British government had tried to create a register of seamen to ensure that they could mobilize quickly, but the attempt proved largely unsuccessful. A naval reserve was never created, largely because legislators feared a standing navy was too expensive or politically volatile to maintain. Impressing on the seas was a long-standing practice in the navy, and the big wars of the eighteenth century caused shore impressment to be increasingly important. During the Seven Years’ War, the impress service expanded dramatically to meet the demand for seamen. As late as 1740, the Admiralty’s pressing activities were primarily focused on the south of England, but by the end of the war, it had grown exponentially in both size and geographic coverage. The manning of the ships commissioned in 1755 proceeded quickly, and there was little indication at the time that there would be a shortage of seamen.⁷⁸

The first foray of the Western Squadron of the Royal Navy to North America sailed between the 27th of April and the 11th of May, 1755, and in the meantime another seventeen ships had been commissioned. The general mood around the Admiralty was optimistic, but as the summer approached it began to wane.⁷⁹ In June, Admiral Boscawen, commander of eleven ships

⁷⁷ From a series of letters included in *Social England: A Record of the Progress of the People in Religion, Laws, Learning, Arts, Industry, Commerce, Science, Literature and Manners*. H.D. Tirall, ed. (Cornell University Library), 288. Note that the Navy only admitted a select few from prisoners, chiefly debtors and smugglers. See Rodger, *Wooden World*, 171.

⁷⁸ Richard Middleton, *The Bells of Victory: The Pitt-Newcastle Ministry and Conduct of the Seven Years’ War, 1757-1762* (Cambridge: Cambridge University Press, 2002), 24-28.

⁷⁹ Gradish, *Manning*, 32.

sent to North America, reported that his men were beginning to suffer from fever and scurvy. Unable to return back to England with so few able crew members, the majority of his ships remained in Halifax, while those that did return to England had their crew capacity reduced by about 2,000 men who either had died or were too ill to return to sea. Admiral Hawke also reported illness among his fleet, stating that his crews were falling "...so fast in fevers that I am afraid I shall not be able to keep out long."⁸⁰ The number of sick cut drastically into the manned strength of the navy by the end of 1755: besides the 2,000 sick and dead from Boscawen's fleet, another 4,000 from the channel fleet had been declared sick or dead, filling the hospitals and sick quarters. The hospitals became so full that the Admiralty reported that "...there were great numbers of sick for whom no room could be made, and who, to the great detriment of their health and retardment of their cure, were on board the ships, and many more who were less ill and could be trusted were allowed to be ashore at large for their recovery."⁸¹ The number of total men lost in 1755 numbered 2,162 deaths, and 1,227 declared unfit due to disease.⁸²

The number of recruits began to dwindle by late 1755. Whereas 20,175 had been added to the muster lists during the first six months of mobilization, only 5,802 were mustered between July and November, not enough to make up for losses sustained from disease and desertion.⁸³ Admiral Anson declared the state of the navy as "deplorable", and personally regretted the spread of illnesses on the ships. The navy at the beginning of 1756 had 168 ships of all rates in commission, but due to the shortage of able seamen, seventy-one ships were unable to leave port, but despite this, the Admiralty wished no contraction of production of ships or recruitment of

⁸⁰ Ibid.

⁸¹ Ibid, 33.

⁸² Ibid.

⁸³ Ibid.

men, pushing ahead with “...the utmost expedition to get our shatter’d squadrons again out to sea.”⁸⁴

It is difficult to discern what proportion of naval crews were coerced men. Muster books are notoriously uneven in quality, particularly as an historical source.⁸⁵ According to N.A.M. Rodger’s selection of five ships in the Seven Years’ War, fifteen percent of the crews were pressed.⁸⁶ Daniel Baugh noted that the percentage of impressed men on Admiral Vernon’s squadron of 1739 was seventeen percent.⁸⁷ By contrast, Michael Lewis calculated that fifty percent of a representative crew of the Napoleonic era was impressed, with some ships above fifty percent.⁸⁸ Nicholas Rogers considers this claim extravagant, but comments that in the current state of research, most would also hesitate to venture any strong generalizations.⁸⁹ Stephen Gradish argues that the majority of men on a ship were likely impressed, as the muster logs would have stated if they had received a bounty for volunteering, and less than half were recorded as receiving this monetary reward.⁹⁰

The impress service was given orders to pick healthy men of seafaring experience, though this rarely happened in practice. From 1740 it implicated anyone between the ages of 18 and 55 who “used the sea”, which allowed the Admiralty to cast a wide net and to draw upon.⁹¹ Picking up the wandering poor was an old practice, with precedents in the Tudor and Stuart eras,

⁸⁴ Ibid, 34.

⁸⁵ Muster books typically recorded the expected crew of the ship, and not the actual crew. Some ships overfilled their capacity several times over. The only complete information we have on the amount of sick and ill are surgeon’s accounts, many of which were not preserved in archives unless they were published such as the cases of James Lind and Frederick Thompson. For more, see Hubley, 191.

⁸⁶ Rodger, *Wooden World*, 178.

⁸⁷ Baugh, *British Naval Administration*, 159.

⁸⁸ Michael Lewis, *A Social History of the Navy, 1793-1815*(London: Allen & Unwin, 1960), 139.

⁸⁹ Roger, *Press Gang*, 4.

⁹⁰ Gradish, *Manning*, 69.

⁹¹ Rogers, *Press Gang*, 8.

but was given explicit statutory endorsement in this century.⁹² Laws against vagrancy would expose the poor to “jail fever” or typhus, which would then be transferred onto the Royal Navy ships, bound for North America.⁹³ Once seized for naval duty, the impressed men were taken on board their respective ships or confined in guardships. Royal Navy physician Gilbert Blane wrote that in these conditions, the men were kept “...under such circumstances of bad air and bodily filth as tend to generate the most virulent infection.”⁹⁴ Many of the important contemporary accounts of fevers came from naval surgeon and physician James Lind. Lind, though famous for his writings on scurvy, was also critical of the cleanliness of Royal Navy ships.⁹⁵ In his *Essay on the Most Effectual Means of Preserving the Health of Seamen in the Royal Navy*, Lind argued for better hygiene on ships and for more humane, but efficient, treatment of seamen.⁹⁶ It was the opinion of Lind that a great deal of ship’s fever came directly from the jails, where freshly discharged convicts were pressed.⁹⁷ He writes in *The Health of Seamen* that “...the source of infection to our armies and fleets are undoubtedly the jails; we can often trace the importers of it directly from them; I have had many patients under my care at Haslar hospital, particularly deserts from the Marines, who were very ill of distemper...It often proves fatal in impressing men on the hasty equipment of a fleet.”⁹⁸ Similarly physician William Brownrigg writes of an unnamed sloop of war sent to protect British shipping interests in the Atlantic. It had been hastily manned with pressed sailors from a guardship, and upon reaching Whitehaven in northwest

⁹² A.L. Beier, *The Problem of the Poor in Tudor and Early Stuart England* (London: Routledge, 2003), 13 and *Masterless men: the vagrancy problem in England 1560-1640* (London: Routledge, 1985), 171-175.

⁹³ For information on the 1744 Vagrancy Act, see Nicholas Rogers’ “Policing the poor in eighteenth-century London: the vagrancy laws and their administration.” *Histoire sociale/Social History* 24, 47 (1991).

⁹⁴ Gilbert Blane, *Observations on the Diseases of Seamen* (London: n.p. 1799), 222.

⁹⁵ Bartholomew, Michael. ‘Lind, James (1716–1794)’, *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

⁹⁶ James Lind, *Essay on the Most Effectual Means of Preserving the Health of Seamen in the Royal Navy* (London: n.p. 1757).

⁹⁷ James Lind, *Two Papers on Disease and Infection* (London: n.p. 1761).

⁹⁸ James Lind, *The Health of Seamen*: “Chapter IV, Of The Jail Distemper, with the Means of putting a stop to it or any other contagious disease” (London: n.p. 1757).

Cumberland in May of 1757, it was in “great distress” with “contracted jail-fever”. The disease spread throughout the town, with Brownrigg writing that he himself was “...seized by fever, and narrowly escaped with my life”. He writes that “...from there, it was communicated to the neighbouring sea-port of Workington; and, in the summer following, to the port town of Cockermouth, where it proved fatal.”⁹⁹ Small fishing ports were as susceptible to disease as were the more populous and busy ports of the southern coast and metropolitan London. As officials feared, and as Lind and Brownrigg knew well, instability and poverty helped the ubiquity of fever and disease amongst the labouring and maritime population of the British Isles.

Impressment of Britons into the Royal Navy

Creating a profile of the British sailor in the Western Squadron in the eighteenth century is difficult in part because official documentation and information on individual sailors was lacking, many of the official records having been based on estimation. Officially, the impress service had the legal right to deliver only “...seamen, seafaring men, and persons whose occupations or callings are to work in vessels and boats upon rivers”, though on short notice, nearly anyone would do. There were problems as to which occupations could be considered related to seafaring. Even carpenters and shipwrights labouring in dockyards but who had never set foot on a boat constituted ‘real seamen’. Naval authorities argued that unless people were specifically protected against impressment, there was nothing to stop the press gangs from putting them into the service. Very few people in the eighteenth century favoured impressment as an acceptable method of recruitment, but it was viewed as a necessary evil.¹⁰⁰ Lieutenant

⁹⁹ William Brownrigg, *Considerations on the Means of Preventing the Communication of Pestilential Contagion, and of Eradicating It in Infected Places*, (London: n.p. 1771), 37.

¹⁰⁰ Daniel James Ennis, *Enter the Press-Gang: Naval Impressment in Eighteenth-Century British Literature* (Delaware: University of Delaware Press, 2002), 196.

William Owen, a press gang officer at Shrewsbury, noted after a round-up that it was a “hard case to act a part so repugnant to one’s own nature and temperament.”¹⁰¹

Though the Sick and Wounded Board could issue protections against impressment of sick individuals, there are no accurate statistics to show how many of these certificates of protection were actually offered¹⁰². It is impossible to say how many of the sailors on British ships were pressed into service, as there is little statistical evidence. In his monograph *The Manning of the British Navy During the Seven Years War*, Stephen Gradish notes that during the years of 1755-1757, a total of 70,566 seamen were enlisted. Of these, 16,953 were specifically listed as having been pressed, and another 20,370 as volunteers. The muster books do not account on how the remaining 33,243 were recruited.¹⁰³ Gradish speculates that the majority of these were pressed, as volunteers would have been accurately accounted in the muster books, and as a ‘cavalier attitude’ existed in eighteenth century naval administrators.

Ironically, despite recruitment difficulties, it was not unusual for navies to be above recruitment strength. The established estimate for 1757 was 55,000 seamen and marines, though based on weekly returns that number may be well over 60,000.¹⁰⁴ In 1759, when the House of Commons budgeted for 60,000 troops, more than 77,000 were mustered. In the larger ships carrying great cannons, eight to twelve men were needed to operate each gun, and to prepare for high mortality, a savvy captain would oversupply his ship with men, slinging hammocks

¹⁰¹ Gradish, *Manning of the British Navy* 55.

¹⁰² The Admiralty boards typically offered agreements with their contractors to supply as many certificates as needed to exempt men found too unhealthy to serve. As the way progressed, the Board decided not to hand over certificates of protection, but instead instructed press gangs to avoid contractors and certain groups around the docks. For more, see Gradish, *Manning of the British Navy* 65-69.

¹⁰³ Ibid, *Manning of the British Navy* 69.

¹⁰⁴ Stephen Conway, “Mobilization of Manpower”, *Historical Research*, Vol 77 (2004), 379.

between the cannon carriages.¹⁰⁵ The ships were extremely valuable, taking years to build and a significant investment in material and money. The Admiralty considered it unthinkable to let ships sit idle in port because of a lack of manpower to sail them, lying as “useless as if they did not exist.”¹⁰⁶ Not all sailors were British or Irish, as the practice of entering men’s place of origin in records began only after the Seven Years’ War. Colonial sailors and soldiers were typically of different social backgrounds and joined for different motivations than their British counterparts. The typical histories of the manning of the British Navy during this period show that the majority come from lowly backgrounds and mostly had no other opportunities waiting for them after their lengthy military service. In contrast, provincials or colonials wished to sign up for a few years of service at most, and usually expected to return home every winter. Officers in North America found that desertion increased dramatically during the harvest months as soldiers would leave to return home to a family farm. Many of these provincial recruits came from modest land-owning families, and most anticipated settling on their own farmland within a few years: their military service was but a temporary adventure or financial opportunity.¹⁰⁷

During the Seven Years’ War, the government and the Admiralty also relied on private citizens and civil authorities to assist with manning the navy. With the commencement of mobilization, the Admiralty sent press warrants to mayors and other authorities of British regions, with orders to “Impress as many seamen as they possibly can.”¹⁰⁸ In the beginning of 1755, the Privy Council instructed the mayors and magistrates of fifty-seven towns and cities in England, Scotland, Wales and the Isle of Wight to press seamen. Many eighteenth century towns and parishes regarded the Seven Years’ Wars as a means of ridding themselves of unwanted

¹⁰⁵ Conway, “Mobilization of Manpower”

¹⁰⁶ Gradish, *Manning of the British Navy*, 29.

¹⁰⁷ Charters, *Disease War, and Imperial State*, 142.

¹⁰⁸ Gradish, 59.

inhabitants, and there were cash rewards for the reporting or apprehension of viable seamen. Private citizens received thirty to forty shillings for each able seaman discovered and reported, whereas peace officers received a flat rate of twenty shillings for each seaman they apprehended, and a travel allowance of six pennies a mile to cover the cost of escorting them to the nearest recruitment officer.¹⁰⁹ By 1762, this was increased to five pounds per able seaman and fifty shillings per ordinary seaman, with a larger travelling allowance covering more possible area for the search.¹¹⁰ Though the majority of the ‘able-bodied vagrant poor’ and imprisoned served chiefly in the army, they could also find themselves forcibly recruited into the navy during this time.¹¹¹ By mid-century, the streets were routinely searched for potential recruits, an act that the Times reported as causing “...a visible change in the streets...all the idle, vagabonding part[s] are removed...and in addition, thereby made to the safety of the inhabitants. So many poor fellows, without employment, and acting under the combined influence of distress and drink, must be thieves or rogues, if not otherwise provided for.”¹¹²

For a period between 1755 and 1805, *The Gentleman’s Magazine* became a popular publication for naval officers to communicate to the public, and to each other.¹¹³ Letters published in *The Gentleman’s Magazine* at the time suggested that if people could not be useful to society at home, they could be useful abroad. Gypsies, debtors, the unemployed, beggars, prisoners, and even “...torch bearers, wheelbarrow drivers and chimney sweeps” might be sent

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ For more on impressment into the British army during the Seven Years’ War, see Stephen Burnwell’s *Redcoats: The British Soldier and War in the Americas* (Cambridge: Cambridge University Press, 2006) and S. Frey’s *The British Soldier in America* (Houston: The University of Texas Press, 2012).

¹¹² *The Times*, October 2, 1787.

¹¹³ *The Gentleman’s Magazine* included many discussions on health and hygiene practices. Letters published in the magazine show a great interest in the ventilation of ships, and how the claustrophobic conditions create a breeding ground for disease. A great series of letters debated the nature of scurvy, with some naval surgeons writing that even though the British warships were cleaner than merchantmen, scurvy was still prevalent. Early calls for uniforms were presented to the magazine, as well as calls for sailors to be inoculated against smallpox. For more on the *Gentleman’s Magazine*, see Charters *Imperial State*, 92, and Lincoln, *Medical Profession and Representation*, 206.

into battle where they “...might stop a ball and prevent the loss of better men.”¹¹⁴ Gypsies were a particular target for the ire of these letters, with a letter saying “...now is the time to make the whole race of gypsies useful to the community, who for many years have been a burden to the community, and a reproach to our laws, or to those who are entrusted with the execution of them. There is not a male among them, from six years old to sixty, that might be not employed by land or by sea.”¹¹⁵ The Admiralty began to accept vagrants who had become charges of the Marine Society, founded in 1756 by Jonas Hanway.¹¹⁶ The Society dedicated itself to gathering, training, and equipping young men and boys in London for the Royal Navy. They were officially not volunteers, and at first were berthed with impressed men aboard the disease-laden guardships, but they quickly became “ragged, dirty and sickly” according to Admiral Henry Osborn. They were soon moved to private quarters away from the impressed men to better protect their health, and to “prevent the men from stealing their clothes.”¹¹⁷ In total, the Marine Society offered about 5,400 men and 4,500 boys during the war.¹¹⁸

Impressment was defended as a royal prerogative grounded in “immemorial usage”, a price that needed to be paid for British liberty, prosperity and trade. Britain required a strong navy to safeguard against foreign powers and protect its overseas interests. In these circumstances, impressment was seen as a reasonable request upon the “lower ranks of life” to whom the “offensive and disagreeable public duties fell”.¹¹⁹ As such, it was argued that it was

¹¹⁴ *The Gentleman's Magazine*, February 1762.

¹¹⁵ *The Gentleman's Magazine*, February 1762.

¹¹⁶ James Stephen Taylor, ‘Hanway, Jonas (bap. 1712, d. 1786)’, *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

¹¹⁷ *Ibid*, 85.

¹¹⁸ Following the war, the Admiralty berthed the boys in ships, and cared for them until they found employment in the Merchant Marines. For more on the Marine Society and Jonas Hanway, see J. Taylor’s “Philanthropy and Empire: Jonas Hanway and the Infant Poor of London” in *Eighteenth-Century Studies*, Vol 12, 1979.

¹¹⁹ Charles Butler wrote the first sustained defense of Impressment in 1778, continuing that “[as the] noble and opulent of the nation” contributed taxes, the poor must also pay in “personal labour and services”. For more, see Charles Butler, *An Essay on the Legality of Impressing Seamen* (London: n.p. 1778).

compatible with common law and the duties of different ranks within a divinely-ordained unequal society. More practical contemporaries argued that impressment saved the poor from idleness and intemperance. It made the poor useful to their country, freeing the nation of “idle and reprobate vermin, by converting them into a Body of the most industrious People, becoming the very nerves of our State.”¹²⁰ One letter to the Gentleman’s Magazine states “...I take it for granted that those who are of least use at home are the fittest to be employed in the service of their country abroad.”¹²¹ Nicholas Rogers argues that the success of impressment ultimately relied on the tacit agreement between the Admiralty, the government, and the employing classes. He states that from the employer’s perspective, although the press gang appeared at times chaotic and arbitrary, it reduced crime by incorporating a migrant male population that might otherwise steal, particularly during wartime. It would also allow employers situated near docks to retain their more valuable men, and also strengthen their hold over them. His argument has merit, as implied in a 1739 *London Evening Post* report that when “some sturdy Fellows belonging to a ship near Southampton...refus’d to go on the Voyage without a Rise of Wages’, the master of the Vessel ‘gave scent of them to a press gang’.”¹²²

The impressed themselves viewed impressment as a violation of their birthright as British citizens. Port workers and fishermen viewed press gangs as a persistent hazard. The Middlesex Journal observed that “...for some time, it had been a common practice for the press-gangs to seize an abundance of tradesmen indiscriminately, and carry them to the rendezvous houses,

¹²⁰ Philonautica, *The Sailor’s Happiness*, 1751, 19-20.

¹²¹ *The Gentleman’s Magazine*, February 1762.

¹²² *London Evening Post*, November, 1739, 3-6. For more on the use of the press gang with work disputes, see Rogers, “Vagrants”, 110. He notes that portside employers used press gangs to rid themselves of unruly apprentices, and that impressment facilitated the highly regulatory, personal, and discretionary character of labour control played an important part in Britain’s maturing capitalist economy.

where they extort money from them to let them go again.”¹²³ In the opening months of mobilization of the Seven Years’ War, at least seven anti-impressment riots were reported in the British press and in letters to the Admiralty. Press gangs were attacked by “armed and dangerous men, their faces blacked”. In the ports of Bristol and Liverpool, privateering vessels often docked to refit and resupply, their captains particularly hostile towards any attempt for press gangs to poach their crew. By the summer of 1759, one Bristol press gang captain reported that every member of his group had been wounded, with one killed.¹²⁴ Letters to *The Gentleman’s Magazine* applaud magistrates for both standing up to the press gangs seeking to impress working Britons, while also complimenting them on directing them to the poor and homeless. One letter from 1757 congratulates the Lord Mayor of London, Marshe Dickinson, for defending “fellow citizens, their apprentices, and servants against the audacious attempts of press gangs,” while also stating that his vigilance, and that of the impressment officers, “[cleared] the streets of this city from begging vagrants.”¹²⁵

Throughout the war, justices of the peace attempted to bring the poor and sickly in their parishes into the navy. Sir John Stratham of Wigwall in Derbyshire urged the Privy Council to collect ‘vagrants, thieves, housebreakers, and Scotch and Irish beggars’. Letters in the *Gentleman’s Magazine* support this idea, stating that it “...would save a great deal of trouble at the Old Bailey.”¹²⁶ The monetary bounty for finding seamen, in addition to the perceived ability to clear out parishes of unwanted persons, caused great round-ups of the poor. There were particular complaints of men sent from Bristol and Gloucester, with one reporting saying “...the sending such men is aggrieving the subject, embarrassing me to dispose of them, of no use to the

¹²³ Rogers, “Vagrants”, 108.

¹²⁴ Ibid, 109.

¹²⁵ *The Gentleman’s Magazine*, November 1757.

¹²⁶ *The Gentleman’s Magazine*, February 1762.

public, a great expense to the government, and tends to no other purpose than to make [the bounty finders] numbers raised appear considerable to the Lordships.¹²⁷

Even with their need of men, the Admiralty rejected those with obvious medical conditions as being totally unfit for life aboard a ship. During the Seven Years' War, the constables of Newcastle packed the jails with potential recruits, but the regulating officer, Edward Wheeler, discharged many of them as unsuitable for service. A recruiting office in Leicester once rejected fifty-five out of sixty vagrants because they were medically unfit.¹²⁸ Admiral Osborn at Portsmouth often rejected men brought to him by constables because they were 'slite people of no strength, with maimed hands and arms, ulcerated legs and full of itch.'¹²⁹ The Admiralty did not reject vagrants and prisoners who appeared to be in reasonably good health, even those who had picked from places that were traditionally vectors of disease, such as prisons or tenement buildings.¹³⁰ Impress officers were susceptible to pressure and bribes, but the obviously sick would likely be sent back by the first flag officer that saw them.¹³¹ The Marines were more tolerant in taking in the sick, and the Recruitment Act in effect permitted impressment in this manner, so the sick may have ended up aboard naval ships anyway.¹³² Royal Navy physician Gilbert Blane noted that the impress service frequently "...required that men be received from jails", and that they "...may have infection about them."¹³³ In 1770, the frigate *Tartar* was crewed in Deptford. In his essay on scurvy, the ship's surgeon Frederick Thomson describes the men that they took on from the diseased guardship as being "the refuse of

¹²⁷ Rodger, *Wooden World*, 167.

¹²⁸ Gradish, *Manning of the British Navy*, 84.

¹²⁹ Ibid.

¹³⁰ Nicholas Rogers further argues that fluctuations in property offenders and violators of vagrancy laws during times of war suggest that the impress service removed many men perceived to be undesirable or unemployable from the city streets. For more see Rogers, "Vagrancy", 110.

¹³¹ Rodger, *Wooden World*, 174,

¹³² Ibid.

¹³³ Blane, *Observations on the Diseases of Seamen*, 222.

mankind.”¹³⁴ Thomson later wrote that the “sicklist was truly formidable”, with nearly the entire ship sent to the Royal Hospital at Haslar, with the exception of those left onboard to fumigate the ship.¹³⁵ Sea officers were often colourful in their description of the poor quality of their recruits, one writing “...numbers being invalids, incurables for various diseases, blind, lame, ruptured, and the rest of the dregs of the earth, having been refused by all the ships they’ve been offered to.”¹³⁶ Letters from the Admiralty Board show that there were concerns with admitting the sick aboard ships. Admiral Thomas Smith suggested providing them with clean clothes and a bath before they boarded Royal Navy vessels, but this initiative was disliked because if the men deserted, the clothes would be viewed as a total loss.¹³⁷ Sailors who were sent to navy hospitals and sick quarters frequently deserted. Early in 1755, Admiral Hawke suggested posting sentries at Haslar. The Admiralty agreed, and appointed a guard of marines to patrol the hospital grounds.¹³⁸ The most effective means of discouraging desertion among sick seamen was to place them aboard hospital ships anchored offshore. Though this made escape very difficult, it could hold only a limited number of sick, and would frequently have its cots overflowing with ill sailors.¹³⁹

Fevers: Typhus and Smallpox in Britain

‘Fever’ was a generic term used to describe any disease that could not be specifically treated at the time, including typhus, typhoid, paratyphoid, yellow fever, and perhaps others,

¹³⁴ Frederick Thomson, *An Essay on the Scurvy: shewing Effectual and Practicable means for its Prevention at Sea. With some Observations on Fevers, and Proposals for the more Effectual Preservation of the Health of Seamen* (London: n.p, 1790).

¹³⁵ Thomson, *Essay on Scurvy*, 118.

¹³⁶ Rodger, *Wooden World*, 167.

¹³⁷ Gradish, *Manning of the British Navy*, 83. By 1758, there was a ship set aside at Portsmouth where (chiefly French) prisoners of war could be cleaned and provided with clean clothes, and allowed to rest for ten to fourteen days.

¹³⁸ Crimmin, "The sick and hurt board and the health of seamen C. 1700–1806", 54.

¹³⁹ *Ibid.*

though most commonly it meant typhus. A physician in the channel fleet wrote a concise description of the symptoms of the ‘most common fever’:

The skin acquires a dry and parched feel, the tongue becomes hard and furred, and the secretion of saliva as it were suspended. The confusion of head and tendency to stupor, increase, accompanied with more or less delirium, which, being at first transient, becomes gradually more continued. The state of the bowels and urine is irregular, but as the disease proceeds, diarrhoea comes on. Symptoms of putrescence now make their appearance, consisting in small livid spots, like flea-bites, dispersed over the skin. The stupor of the head becomes more permanent; haemorrhage also arises from different parts, especially from the gums and intestines, being in the latter case conjoined with diarrhoea, to terminate in death.¹⁴⁰

Documents showing the numbers of mariners treated at Haslar in 1759 show that ‘fevers’ afflicted nearly four times as many sailors as scurvy, and while scurvy was virtually eliminated following the introduction of lemon juice, and smallpox was brought under control following the discovery of inoculation, sailors were plagued by fevers into the nineteenth century.¹⁴¹

Typhus has long been associated with war. This is not only because warfare leaves civilian populations without proper fuel, clothing, and sanitary measures, but also because typhus emerges in the crowded and unsanitary conditions of military camps. Although diagnosing a disease from a distance of two-and-a-half centuries is a precarious practice, the symptoms and methods of transmission of what eighteenth-century practitioners called hospital, jail, ship, camp, malignant, and petechial fever, as well as the stable nature of the virus, identify it as consistent with what is known today as epidemic typhus.

Typhus epidemics were common in the eighteenth century. Mortality rates were high, with some outbreaks cresting at seventy percent deaths among the infected. Caused by the microorganism *Rickettsia prowazekii*, the disease is transmitted between humans by infected

¹⁴⁰ Lloyd, C, J.L.S. Coulter, and J. Keevil. *Medicine and the Navy*, Vol 3, (London: E&S Livington, 1958), 339.

¹⁴¹ *Ibid*, 338.

body lice. A louse ingests the blood of an infected human through a bite, and then spreads the microorganism either through the skin by an individual's scratching of a louse bite, or by the person's inhaling dried *rickettsiae* from louse excrement. In eighteenth century Britain, it has been associated with deprivation and "...inclosure where great numbers of the human race are collected together, and especially where poverty much prevails...and where but little attention is paid to cleanliness, pure air, and activity".¹⁴² Significant typhus outbreaks in Britain from 1730-1750 were traced to prisons, workhouses, hospitals, and other homes for the poor.¹⁴³ The physician William Hillary wrote an account of what was likely typhus infecting the town of Ripon, North Yorkshire, in 1723, noting that it primarily affected the poor. He wrote, "Nor did any other method, which art could afford, relieve them: insomuch that many of the little country towns and villages were almost stripped of their poor people."¹⁴⁴ A terrible typhus epidemic hit Britain between 1740 and 1742. Infection was said to begin at both Plymouth and Bristol, with infected ships spreading typhus among the local populace. There were traces of typhus at Worcester in the spring assizes, and at Exeter, it was traced to a delivery of prisoners.¹⁴⁵ The previous winters had been unseasonably cold, and the spring and summer of 1741 was unseasonably hot and dry, leading to a shortage of crops, and a general economic depression. Physician John Barker linked the epidemic with the depression, saying:

¹⁴² John Mason Good, *A Dissertation on the Diseases of Prisons and Poor Houses, Published at the Request of the Medical Society of London, Having Obtained the Premium Offered by the Society for the Best Essay on this Subject* (London: 1794), np.

¹⁴³ Candice Ward, *Desire and Disorder: Fevers, Fictions, and Feeling in English Georgian Culture* (Lewisburg: Bucknell University Press, 2007), 100. Ward notes that the statistics gathered by letters to aldermen and mayors during that period only calculated the dead among the more "valuable subjects", leaving accurate figures of dead impossible to gauge.

¹⁴⁴ William Hillary, 'An account of the principal variations of the weather and the concomitant epidemical diseases from 1726 to 1734 at Ripon', bound with his essay on the smallpox (London: G. Hitch, 1740), 16.

¹⁴⁵ Charles Creighton, *A History of Epidemics in Britain*, Vol 2 (Cambridge University Press, 1891), 79.

The general poverty which has of late prevailed over a great part of this nation, and particularly amongst the woollen manufacturers in the west, where the fever has raged and still continues to rage with the greatest violence, affords but too great reason to believe that this has been one principal source of the disease.¹⁴⁶

Barker explained that the price of wheat had driven the poor to live on “bad bread”, made of “horse-beans, pease, and coarse unsound barley”¹⁴⁷, though this was a contentious theory.

Published in the *Gentleman’s Magazine*, a Birmingham surgeon with the pen name of “White” pointed out that up to this point, great numbers of poor had been living on this bread for a very long time, and had only been recently affected by the fever, in addition to the fever being not just constrained to just the poor.¹⁴⁸ White writes that “...Every Gentleman in the practice of [medicine must know] that this fever was not confined to the poor...[and that] Hogs are rarely [ill] three months after eating [the beans]”, and that “...I imagine then, according to the ingenious [Thomas] Sydenham, that the disease may be ascribed to a contagious Quality in the Air, arising from some secret and hidden Altercation in the Bowels of the Earth, passing thro’ the whole Atmosphere, or to some malign Influence from the heavenly Bodies.”¹⁴⁹ It was suspected by some physicians that weather was to blame for the fever. Dr. Fothergill published a regular weather report in the *Gentleman’s Magazine* between 1751 and 1755, holding it accountable to the fluctuations of sickness in London.¹⁵⁰ In London, the deaths from typhus in 1741 reached 7528, the highest total in the bills of mortality for that year.¹⁵¹ Europe’s largest city at the time, London was constantly under threat by lax public hygiene and sewage disposal. The slums of

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ *The Gentleman’s Magazine*, January 1742.

¹⁴⁹ Ibid.

¹⁵⁰ *The Gentleman’s Magazine*, from 1751-1755. Fothergill also makes note of smallpox in his records, using his half-decade long study to attempt to reform the London Bills of Mortality, which he viewed as untrustworthy. In his letter published in *The Gentleman’s Magazine* of 1752 under the pseudonym ‘Devoniensis’, he writes “The smallpox, of all diseases mentioned in the weekly bills, is perhaps the only one of which we have any tolerably exact account, it being a disease which the most ignorant cannot easily mistake for another.”

¹⁵¹ Creighton, 80.

Whitechapel, Clerkenwell and St. Giles crammed in lower classes into tenement buildings.¹⁵²

The Thames served as both a source of water and a repository of sewage disposal, with human waste piling in cesspools that sometimes leaked into wells, pipes and cellars.¹⁵³

Using official reports on the state of the prisons by physicians and statistician John Howard, John Heysham, and John Ferriar, as well as the 1729 House of Commons committee on the “state of the gaols in this Kingdom”, the late Victorian scholar Charles Creighton painted a grim picture of British prisons in the mid eighteenth century:

...Prisoners [were] abused or neglected if they could not pay, some prisoners kept for years after their term was expired, the penniless crowded three in a bed, or forty in one small room, while some rooms stood empty to await the arrival of a prisoner with a well-filled purse. On the common side of the Fleet Prison, ninety-three prisoners were confined in three wards, having to find their own bedding, or pay a shilling a week, or else sleep on the floor...Those who were well had to lie on the floor beside the sick...They were forced to ease nature within the room, the stench was noisome beyond expression.¹⁵⁴

Two of the most notorious outbreaks of typhus, at Taunton in 1730 and London in 1750, coincided with the assizes, the periodic court sessions when prisoners were brought to trial. The May session of the 1750 assizes was particularly well attended because of public interest in the trial of Captain Edward Clark, who had killed a fellow officer in a duel. In addition to Captain Clark, there were nearly one hundred other cases on the docket, an unusually high number.¹⁵⁵ Sir Michael Foster recorded the 1750 “Black Assizes”, noting that the passages from Newgate Prison to the Old Bailey were unusually crowded and filthy, with a foul smell emanating from the courtroom. He stated that “within a week, or ten days at most, after session, many people

¹⁵² For more on London’s structure and hygiene in the eighteenth century, see Jerry White’s *A Great and Monstrous Thing: London in the Eighteenth Century* (Boston: Harvard University Press, 2013).

¹⁵³ Roy Porter. “Cleaning up the Great Wen: Public Health in Eighteenth Century London” *Medical History*, Vol 35 (1991), 61-75.

¹⁵⁴ Charles Creighton, *A History of Epidemics in Britain*, Vol 2 (Cambridge: Cambridge University Press, 1891), 91.

¹⁵⁵ Ward, *Desire and Disorder*, 104.

who were present...were seized with a fever of the malignant kind, and few who were seized recovered.”¹⁵⁶ The distribution of the cases was regarded as peculiar, as only those who had occupied the left side of the court had been afflicted. The Lord Mayor of London and the Presiding Judge, as well as many other gentlemen of position, died of fever. The incident set off a panic, and there are reports of Londoners fleeing the city to escape infection, though evidence suggests that typhus only infected those who had attended assizes.¹⁵⁷ When foul air was suspected to cause the disease, there was a renewed interest in indoor ventilation. Physician John Pringle proposed a windmill-like device be built atop Newgate prison to remove the foul air from within the cells. Completed in 1752, when Pringle went to visit Newgate to see the windmill put into operation, it was rumoured that when the first blast of foul air left the exhaust pipe, two workers on the roof fell down dead. Though perhaps an apocryphal legend, it is recorded that seven out of the eleven workmen involved in constructing the windmill contracted typhus.¹⁵⁸

Prisons in Britain were slow to adopt other new ventilations due to a window-tax. By the Act of 7 and 8 of William and Mary, Cap. 18, taking effect from the 25th March, 1696, every inhabited house had to pay a duty of up to twenty shillings per year on windows. In 1746 this law was amended to increase the duty owed for every window more than twenty. The tax had a harmful effect on prison sanitation, as windows were bricked up to avoid assessment, severely limiting fresh air and adding to unsanitary conditions. Creighton writes that it was enforced by a “...galling and corrupt machinery of commissioners...Light and air, two of the primary necessities of life, were in effect taxed. It was among the poor, and especially the inhabitants of

¹⁵⁶ Michael Foster, *A Report &c. and of other Crown Cases* (London: n.p. 1776), 74.

¹⁵⁷ Londoners fleeing to the countryside to escape plague was not unique to this period. For a history of how the people of London reacted to disease, see Lloyd Moote and Dorothy C. Moote’s *The Great Plague* (Baltimore: John Hopkins University Press, 2004.)

¹⁵⁸ John Pringle, “An Account of Several Persons Seized with the Goal-Fever, Working in Newgate; And of the Manner, in Which the Infection Was Communicated to One Intire Family” in *Philosophical Transactions* (1753), 42-55, and Christopher Collins, David Kennedy, “Goal and Ship Fevers”, *Perspectives in Public Health*, vol 129 (2009), 163.

tenement houses, that the effects were truly disastrous.”¹⁵⁹ Physician Robert Willan, pioneer of dermatological medicine, wrote of fever in late eighteenth-century London, mentioning that the passages of tenement houses were “kept dark in order to lessen the window-tax...and the air therefore kept foul”.¹⁶⁰ A typhus outbreak in Carlisle in 1781 reportedly began in a house that had “blocked up every window to lessen the burden of the window-tax”.¹⁶¹ The prison reformer John Howard, himself dying of typhus in 1790, noted that the window tax fell on the keepers of the jails and that “...this tempts them to stop the windows and stifle their prisoners. This is also the case in many work-houses and farm-houses, where the poor and labourers are lodged in rooms that have no light nor fresh air.”¹⁶² In a grim depiction of the prisons, Howard wrote of three men occupying one prison cell that measured eight feet by fifteen feet and was so low that even the shortest had to stoop. The three men had to take turns standing by a small grating in order to breathe. Many jailers refused to accompany Howard into the cells because of the typhus within, some cell doors having not been opened for five weeks. Howard noted that after visiting a prison, his clothing emitted so vile a stench that he could not remain in his closed coach.¹⁶³

Two variants of the smallpox virus are commonly recognized: *Variola major*, with a mortality rate of approximately twenty-five percent, and *Variola minor*, with a mortality rate of approximately one percent. The severity of smallpox appears to have changed over time: most medical historians agree that smallpox became much more fatal sometime during the sixteenth century, and eighteenth-century contemporaries recognized that there could be a “good” kind and

¹⁵⁹ Creighton, *History of Epidemics in Britain*, 90.

¹⁶⁰ Robert Willan, *A Report on the Disease in London, 1796-1800* (London: n.p. 1801). The exponential growth of London to the eighteenth century led to the creations of tightly packed houses and tenements, only accessible by an endless maze of narrow passages and alleys. In these mazes, people were closely packed. Overcrowding had been an issue since the Elizabethan era, and had it only grown to be a worse problem under the Stuarts. The newer parts of London were built over cesspools and ‘intramural graveyards’. For more, see Roy Porter’s “Cleaning up the Great Wen: Public Health in Eighteenth Century London” *Medical History*, Vol 35 (1991), 61-75.

¹⁶¹ Creighton, *History of Epidemics in Britain*, 88.

¹⁶² John Howard, *State of the Prisons in England and Wales* (London: n.p. 1777).

¹⁶³ *Ibid.*

a “bad” kind, most likely corresponding to *minor* and *major*.¹⁶⁴ Minor cases have been tracked throughout eighteenth-century Britain. Physician Charles Deering writes in 1731 that “out of one hundred smallpox patients who were under my care within the course of two years, I lost but one. However, sincerity obliges me to own that the smallpocks were not during that whole time generally malignant.”¹⁶⁵ At mid-century, physician Richard Brocklesby wrote that “...Small-Pox is reckoned deservedly amongst the most dangerous diseases that are commonly to be met with throughout all Europe.”¹⁶⁶ Dr. Robertson, a physician in the Royal Navy, says that “...when I arrived at Hythe in the beginning of April, 1783, the smallpox was pretty well general...My patients, about fifty in number, all did well.”¹⁶⁷

Those who survived could be left with blindness, skin infections, infertility, and a complexion marked with scabs and lesions. Smallpox incubation lasts from ten to twelve days, after which sufferers experience back, muscle, and head pains, high fever, and the characteristic rash. In severe cases, the rash becomes confluent, causing septic skin infections and massive haemorrhages of the skin, lungs, and other organs. Smallpox was relatively rare as a fatal disease in England until the mid-seventeenth century, when it replaced plague as the most feared of contagions.¹⁶⁸ British historian Thomas Babington Macaulay states that smallpox “. . . was then the most terrible of all the ministers of death. The havoc of the Plague had been far more rapid; but the Plague had visited ... once or twice and the smallpox was always present, ... tormenting with constant fears all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power.”¹⁶⁹ This aggressive form was highly lethal, killing one-seventh to

¹⁶⁴ Charters, *Disease, War, and the Imperial State*, 43.

¹⁶⁵ C. Deering, *Account of an Improved Method of Treating the Smallpocks*. (Nottingham: n.p. 1737).

¹⁶⁶ Charters, *Disease, War, and the Imperial State*, 43.

¹⁶⁷ Creighton, *History of Epidemics in Britain*, 546.

¹⁶⁸ S. R. Duncan, Susan Scott and C. J. Duncan, “Smallpox Epidemics in Cities in Britain” in *The Journal of Interdisciplinary History*, Vol 25. (1994), 225.

¹⁶⁹ Thomas Babington Macaulay, *History of England* (London: Macmillan, 1913-15, 1957), 532.

one-quarter or more of its victims, and conferring lifelong immunity on its survivors. As the frequency of epidemics increased, a larger proportion of the adult population became immune, as smallpox was a childhood disease in the London-born population. However, much of London's population consisted of migrants, some of whom had not encountered smallpox in childhood, and so, despite the endemic nature, adults still comprised a significant share of smallpox victims.¹⁷⁰ The first epidemic of smallpox in London, as shown by the Bill of Mortality, occurred in 1628, followed by a moderate epidemic in 1632, and a severe one in 1634. The London figures are lost for the mid seventeenth century, although it is known that a major outbreak struck during this time.¹⁷¹ Only limited information is available on smallpox epidemics in towns during this period, but there are multiple reports of smallpox outbreaks in rural Britain, and the widespread mortality suggests a population not used to the disease. An example is the outbreak at the Island of Foula in 1720, where only six people survived out of a population of about 200.¹⁷² The impacts of typhus and smallpox on different phases of the Western Squadron of the Royal Navy's involvement in the Seven Years' War will be further developed below.

¹⁷⁰ John Landers, *Death and the metropolis: studies in the demographic history of London, 1670–1830* (Cambridge: Cambridge University Press, 1993), 153–159. Davenport notes that Creighton considered smallpox to be 'exclusively an affair of childhood' in large provincial towns, and attributed the high proportion of adult smallpox victims in London to its peculiarity 'in receiving a constant recruit direct from the country', where he supposed smallpox to be infrequent. Razzell provides some evidence of a north–south divide in smallpox behaviour, with smallpox seemingly a childhood disease even in small northern settlements by the mid-eighteenth century, but still an infrequent epidemic disease affecting all ages in some southern market towns. For more, see R. Davenport, *The Decline of Adult Smallpox in Eighteenth-Century London*, Creighton, *History of Epidemics*, pp. 527, P. Razzell, *The Conquest of Smallpox: The Impact of Inoculation on Smallpox Mortality in Eighteenth Century England.*, pp. xi–xiii;

¹⁷¹ S. R. Duncan, Susan Scott and C. J. Duncan, "The Dynamics of Smallpox Epidemics in Britain, 1550–1800", *Demography*, Vol 30. (1993), 490. It has been suggested that smallpox was endemic in the cities of Nottingham, Chester, Northampton, Norwich and Manchester, but little information exists for these areas after 1725 and the advent of inoculation.

¹⁷² Sheldon Watts. *Epidemics and History: Disease, Power and Imperialism* (New Haven and London: Yale University Press. 1997) . 85–86.

Conclusion

The manning of the navy was one of the most serious and persistent problems confronting British government and naval administrators during the Seven Years' War. The beginning of mobilization brought optimism to the Admiralty, but expeditions to North America were crippled by disease and desertion from the start. There was an attempt at recruiting volunteers, but there were never enough. The navy was very unattractive compared to the merchant marines, even though seamen were paid more and served only for a set time. Recruitment efforts expanded to include the impressment of Britons into the unmanned ships waiting in British waters. Because the muster logs are incomplete, there is great historiographical debate on exactly how many people were impressed into the navy. It is likely, however, that by the end of the conflict, a significant portion of crewmembers were impressed sea- and landmen from a variety of socioeconomic backgrounds. Though the impress service was given orders to pick healthy men of seafaring experience, this rarely happened in practice. From 1740, it implicated anyone between the ages of 18 and 55 who "used the sea", which allowed a wide net for the Admiralty to draw upon. Local parishes took it upon themselves to supply unwanted vagrants and transients to the service, as they worried that lean times caused by the conflict would naturally make the poor and destitute lower themselves to crime.

Poor hygienic conditions brought high rates of typhus and smallpox to both prisons and tenement buildings. Typhus was common throughout the eighteenth century, with a series of epidemics causing widespread death in both urban and rural centres. Smallpox caused less of a problem in cities but was spread into port towns by the disembarking of sailors. Prisons were particularly unhygienic because of enclosed spaces and behaviour from prison officials ranging from mismanagement to corruption. Impressed men were sometime drawn from prisons

themselves, or kept there until they could find placement aboard ships. There were attempts by the Admiralty to sift out the obviously sick and wounded from the impressed sailors, and also – later in the war – to begin to provide hygienic services. Nonetheless, logs from captains of impressment gangs, surgeons and physicians all corroborate that men sick with “fever” were slated as crew for British ships going to North America. The conditions on the ships themselves would only spread and worsen the already set-in diseases during the transatlantic crossing.

British medical theory during the eighteenth century suspected that the tight quartering of sailors and the enlistment of sick caused dire hygienic conditions on ships. The financial and logistical situations of the conflict forced the Admiralty to do actions that were known to be counter to good health. Though there were orders to wash and reclothe new sailors prior to officially entering the naval service, the sailors may have spent a month aboard a guardship before they were assigned to their respective ships. There was value placed in a healthy sailor, but that value was an extension towards the greater importance in keeping the Royal Navy's ships afloat. When faced with the decision of having undermanned ships full of healthy sailors, or over manned ships with sick sailors, the Admiralty opted for fully manned vessels. The worry that death in battle or an outbreak of disease at sea would leaving the Admiralty's expensive and valuable ships without a crew outweighed the knowledge that tightly packed ships were vectors of disease.

TWO

‘A MORE DESTRUCTIVE ENEMY’: SICKNESS AND SAILORS AT SEA

*A single infected man, or even part of his clothing, may spread sickness throughout a whole ship's company. When we reflect what havock an infectious fever sometimes makes in a ship...it will generally be found to have originated from taking on board infected men at Spithead – Gilbert Blane*¹⁷³

The opening years of the Seven Years' War were challenging for the Royal Navy. Fleet sickness forced ships to return to port, or severely limited their combat effectiveness. Difficulties with mobilization explain why it was not until 1759 and 1760 that the Royal Navy won any significant victories, as it took four years for Britain to achieve its full naval capability of 300 ships and just over 80,000 trained seamen.¹⁷⁴ High rates of disease correspond to the early periods of mobilization and rapid search for sailors to fill the ships' berths. The lifespan of sailors was short. According to naval surgeon Thomas Trotter in *Medicina Nautica*, they aged prematurely, and few "live to be very old"¹⁷⁵. Blane remarked that "...they are in general short lived, and have their constitutions worn out ten years before the rest of laborious part of mankind." Blane recorded that during the mid to late eighteenth century, the crude mortality rate aboard fleets on foreign shores was twenty-six percent.¹⁷⁶ Fevers and scurvy were the most frequent and fatal diseases in the Royal Navy, as observed by James Lind between 1758 and 1760.¹⁷⁷ In the early stages of the Seven Years' War, the ships dispatched to North America

¹⁷³ Blane, *Observations on the Diseases of Seamen*, 226.

¹⁷⁴ Charters, *Disease, War, Imperial State*, 122.

¹⁷⁵ Thomas Trotter, *Medicina Nautica* (London: n.p. 1787), 41.

¹⁷⁶ Gilbert Blane, *A Short Account of the Most Effectual Means of Preserving the Health of Seamen* (London: n.p. 1780).

¹⁷⁷ George Rosen, "Occupational Diseases of English Seamen During the Seventeenth and Eighteenth Centuries," *Bulletin of the History of Medicine*, Vol 7, (1939), 775. As well as typhus, smallpox and scurvy, two other common seaborne diseases were dysentery and venereal diseases. Dysentery was lumped in with fevers because illnesses with the symptom of diarrhoea fell into the same catch-all category. Venereal diseases appears to have been accepted as a by-product of seafaring life, and outside of strictly religious circles, there was likely no organized attempt to prevent the disease in seamen until the mid-nineteenth century.

were too small for healthy liveable conditions. The largest ships of over a hundred guns had crews as large as nine hundred, while typical third rate ships that sailed to North America had an average of about six hundred.¹⁷⁸ Six hundred souls locked within the confines of a wooden ship created a great amount of waste and garbage, and the opportunity for the spread of disease was immense. Urine, feces, and vomit created breeding grounds for diseases. The sailors were often crammed into tight quarters cheek by jowl, or if they were lucky, in good weather they could sprawl on the top deck to sleep. Unlike other continental European powers, British ships buried their dead at sea, giving them a health advantage over the French and Spanish who would transport the rotting corpses in the bottom hold of their ships to provide land burials. Although the holds of the ships did not carry corpses, British ships did carry spoiled food and vermin. The leaking ships could never fully pump out all water so the ballast of sand or gravel would become putrid. The ventilation was poor, and bilge gases would build up sufficiently to cause suffocation hazards for carpenters working in the hold. The forecabin, traditionally where the sailors' berths were housed, had leaks that allowed the noxious fumes to seep upward from the lower hold. The sailors slept in the same dirty bedding for months at a time. At the beginning of the Seven Years' War, there was not enough room either in quarantined areas aboard the ships themselves, or at on-land or at-sea hospitals. Admiralty documents record that "...there were great numbers of sick for whom no room could be made, and who were on board the ships to the great detriment of their health and retardment of the cure."¹⁷⁹ In *Roderick Random*, surgeon Tobias Smollett from the *Cumberland* describes a sick berth as being "...fifty miserable distempered wretches, suspended in rows, so huddled one upon another, that not more than fourteen inches of space was allotted for each with his bed and bedding; and deprived of the light of the day, as well as fresh

¹⁷⁸ Rodger, *Wooden World*, 29.

¹⁷⁹ Gradish, *Manning of the British Navy*, 33.

air; breathing nothing but noisome atmosphere of the morbid streams exhaling from their own excrement and diseased bodies, devoured with vermin hatched in the filth that surrounded them.”¹⁸⁰ While Smollett’s colourful prose may seem embellished, rats did infest the lower levels of the ships, gnawing into casks and provisions, their fleas spreading disease.¹⁸¹

It is important to note that most of what we understand of diseases from this period is primarily through the medium of medical journals and newspapers published for the growing medical class. During the eighteenth century, hundreds of thousands of Britons went to sea to work or settle, joined by transported slaves, indigenous peoples and livestock. Though most Britons who travelled overseas were civilians, the majority of medical literature across the British Empire was military in both conception and content.¹⁸² The authors wrote from a perspective of state service, and published work as an aid to war. Maritime medicine publications grew in popularity after 1689 as the Royal Navy maintained regular fleets overseas.¹⁸³ Sailors themselves proved excellent research subjects, as did soldiers, prisoners-of-war, incapacitated allied servicemen and slaves.¹⁸⁴ From the mid-eighteenth century, there was an expectation that medical trials would take place at sea, with ships’ surgeons and physicians using the sick aboard as subjects of study and experimentation. Surgeon John Travis argued in 1757 that medical trials

¹⁸⁰ Tobias Smollett, *The Adventures of Roderick Random* (London: n.p. 1748), 149.

¹⁸¹ Lloyd, C, J.L.S. Coulter, and J. Keevil. *Medicine and the Navy Vol 3*. For more on rats in the Royal Navy, see 72-74. Recommended also is the printed pamphlet entitled *The Universal Directory for Taking Alive, or Destroying Rats and Mice, by a Method hitherto Unattempted*, written by Thomas Swaine, a self-described ratcatcher to His Majesty’s Navy. Though his numbers cannot be verified, he claims that there were common infestations of over 2,000 rats in some of the larger ships in the fleet.

¹⁸² J.D Alsop, “Warfare and the Creation of British Imperial Medicine, 1600-1800”, in *British Military and Naval Medicine, 1600-1830*, Geoffrey Hudson, ed. 23.

¹⁸³ There is historiographical debate over the importance that the Admiralty gave to researching and combating maritime illness prior to the eighteenth century. J.D. Alsop argues that there was little incentive for the creation of imperial medical literature, as the principal sufferers were marginalized young males from labouring classes, and that there was not importance placed upon naval medicine until the late 1700s, whereas N.A.M. Rodgers and Patricia Crimmin state that it was always a concern, but that it was only when effective and skilled administrators like Anson took charge of the Admiralty that medical research and publications flourished.

¹⁸⁴ James Lind, while working as a surgeon for the East India Company, allowed malaria to run its course through “...a little black boy” in Bengal so that he could observe its symptoms. He writes of it in *A Treatise on the Putrid and Remitting Marsh Fever, Which Raged at Bengal in the Year 1762* (London: n.p. 1776), 46.

at sea were obligatory, as "...it merits at least an impartial trial in a large ship: for a proposal, which promises a benefit so extensive, and invaluable, should stand or fall, by the test of truth and experience only."¹⁸⁵ The Seven Years' War was a time of great medical advancement in the Royal Navy, with ships eventually increasing in size, lowering crew capacity, and increasing their hygiene and cleanliness. During this period, there was also a transfer of ideas with other nations, including France, Britain's chief adversary.

British and French Naval Medical Knowledge Structures

European medicine in the eighteenth century was notable for its focus on the health of the general population.¹⁸⁶ Both Britain and France maintained extensive medical systems in their armed forces. Each had surgeons and physicians attached to naval vessels, and because the prestige of the medical profession was rising, many publications were disseminated to the public. Historians tend to emphasize the cross-channel differences, contrasting royal and centralized French structures of knowledge with the informal British science independent of state control. The French military maintained men for medical research even during peacetime, and had a large structure of physicians, surgeons, and hospitals, allowing an extensive medical system that was central to both military and colonial operations. The British system was seemingly more ad hoc. Though it was in service to the state, it was far more independent. Some histories paint eighteenth century British medicine as being unrefined and oligarchic, and that's how nineteenth century reformers viewed things in their push for medical improvement.¹⁸⁷ Early to mid-

¹⁸⁵ Alsop, "Warfare and the Creation of British Imperial Medicine, 1600-1800", 32.

¹⁸⁶ Erica Charters, "Colonial Disease, Translation, and Enlightenment: Franco-British Medicine and the Seven Years' War", *The Culture of the Seven Years' War: Empire, Identity and the Arts in the Eighteenth-Century Atlantic World*, F. De Bryn, ed. (Toronto: University of Toronto Press, 2014), 70.

¹⁸⁷ Roy Porter, *Disease, Medicine, and Society in England, 1550-1860*, (London: Economic History Society, 1987), 32. Historians have typically endorsed these reformers views, seeing the eighteenth century as a period of medical stagnation, which was swept aside by a period of reform in the nineteenth century, putting an end to

eighteenth century science in Britain was overwhelmingly unregulated, and the small elite of academically trained physicians were far outnumbered by surgeons and apothecaries, and during the century, the prestige and learning opportunities of these professions grew.¹⁸⁸

Despite logistical and structural differences, the actual substance and practices of medicine in the French and British armed forces were strikingly similar. Rather than the wars being a problem that disrupted the pan-European “republic of letters”, Charters proposes that in fact Franco-British medical dissemination suggests that warfare was an integral part of the Enlightenment’s network of knowledge.¹⁸⁹ Certainly there were contrasting aspects of health and hygiene aboard British and French ships: for example, French Catholics buried their dead on land, preferably in France, leaving bodies to rot and moulder in the hold of a ship, whereas the English would bury their dead at sea. From the records of foreign observers, English ships were typically viewed as being cleaner than other European nations.¹⁹⁰ Though there are clear differences, there are complexities that cloud comparison of the two navies. Records are unreliable and confusing, rendering statistical comparisons flawed. Grouping together desertions and deaths from non-combat causes does not accurately represent health concerns.¹⁹¹ For a ship’s crew in particular, sickness could be just as debilitating as deaths, and different diseases had markedly different results in terms of deaths and long-term debility. Moreover rates fluctuated throughout the course of a war: on the French side, major epidemics of typhus such as at Brest in 1757–58 proved more problematic than diseases such as scurvy.¹⁹² High rates of illness and deaths from disease among French seamen were linked to their high rates of imprisonment in

privilege and nepotism. For more, see N.D. Jewson’s “Medical Knowledge and the Patronage System in 18th Century England”, *Sociology* 8, no 3(1974): 369-85.

¹⁸⁸ Porter, *Disease, Medicine, and Society in England, 1550-1860*, 35.

¹⁸⁹ Charters, “Colonial Disease, Translation, and Enlightenment” 70.

¹⁹⁰ Rogers, *Wooden World*, 39.

¹⁹¹ Charters, *Disease, War, Imperial State*, 138.

¹⁹² *Ibid.*

British prisoner-of-war institutions, further complicating the comparison of disease numbers. Like the British, the French navy faced grave manpower shortages during the war, and though disease was a factor, the main cause of the manpower shortage was the state of the French crown's finances, which left them unable to pay their crews, driving the French sailors to desert and flee the country.¹⁹³ Despite this, medical theories related to the experience of war and colonial expansion continued to develop and spread.

The French military maintained an extensive hospital system in terms of numbers and geographical dispersion. Medicine was a key part of French colonial structures. During the reign of Louis XIV, the administration created and supported an elaborate scientific and technical infrastructure, and as historians of eighteenth-century French science and medicine have demonstrated, "...[it] was not only merely tapped on occasion to aid colonization, but ...quickly became integral to the process."¹⁹⁴ In addition to the army, church, and navy, medicine was instrumental in establishing overseas colonies. The Marine Royale, headed by the Ministère de la Marine et des Colonies, provided the primary institutional basis for colonial medicine. Naval hospitals that grew in the seventeenth century at Rochefort, Brest and Toulon were originally institutions of a medical colonial bureaucracy.¹⁹⁵ Unlike in England, the inoculation of smallpox began in French colonies in the 1740s, decades before it began in mainland France. French medicine in the eighteenth century was typically described as being emblematic of state power and control, and in contrast, British medical structures are characterized as ad hoc: they were typically private, non-state, voluntary and informal. However, despite their smaller bureaucracy

¹⁹³ James Pritchard, *Louis XV's Navy, 1748-1762, A Study of Organization and Administration*, 71.

¹⁹⁴ James E McClellan III., and François Regourd. "The colonial machine: French science and colonization in the Ancien Régime." *Osiris* (2000): 32.

¹⁹⁵ For more on the growth of medicine from colonial environments, see Chakrabarti's *Materials and Medicine*, 19-52.

they were comparable with the French in terms of efficiency and range.¹⁹⁶ The Hurt and Sick Board became a permanent fixture of the Admiralty during this period, and as in France, large-scale hospitals were established, such as Haslar near Portsmouth, which could hold one thousand beds. Medical service began to be a desirable career: in Britain, military medical men were well respected, and John Pringle served as president of the Royal Society from 1772 to 1778.¹⁹⁷

The two central scientific societies in Britain and France during this time were the Royal Society in London, and the Academie royale des sciences in Paris, which employed “European men of letters” who transcended national boundaries.¹⁹⁸ Both had publications that were circulated beyond domestic circles and translated for wider dissemination. A growing number of periodicals had publication in the colonies which included notices and reviews of texts published by both the British and French. In the Royal Society’s *Philosophical Transactions*, reports were often published in the original French. French and English practitioners alike often displayed mastery in the others’ language, and untranslated texts were common in the libraries of medical professionals. Many British physicians would have Dezon’s *Lettres sur les principales maladies qui ont regné dans les hôpitaux de l’armée*, where French physicians would have the work of Richard Brocklesby and James Lind.¹⁹⁹ As the title makes clear, Lind’s text *An Essay on Diseases Incidental to Europeans in Hot Climates*, though based on information gathered during the Seven Years’ War, was meant to be accessible to all Europeans, not just the British.²⁰⁰

¹⁹⁶ Charters, "Colonial, Disease, Translation and Enlightenment", 73.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid, 74.

¹⁹⁹ Ibid, 75.

²⁰⁰ James Lind, *An Essay on Diseases Incidental to Europeans in Hot Climates* (London: n.p., 1777).

Fevers: Typhus and Smallpox at Sea

Regardless of nationality, all mariners in the eighteenth century suffered from such a wide array of diseases and dietary deficiencies that it was difficult for surgeons and physicians to accurately separate the symptoms of one from another. Niacin deficiency caused lunacy and convulsions; thiamine deficiency caused the neurological or cardiac symptoms of beriberi; vitamin A deficiency caused night blindness. Syphilis, malaria, rickets, smallpox, tuberculosis, yellow fever, venereal diseases, dysentery and food poisoning were all common. Typhus, spread by lice in the frequently-shared and rarely-cleaned bedding, was so prevalent in the British navy that it was known as “ships fever” or “gaol fever”. One of the best observations of “ship fever” was provided by Robert Robertson, a physician at Greenwich Hospital. In his book *Observations on Jail, Hospital or Ship Fever, from the 4th April 1776 until the 30th April 1789 made in various parts of Europe and America and on the Intermediate Seas*, Robertson describes typhus as “an evil confined to no particular country or climate, but extend[ed] [in] its fatal effects as far as we have either society or commerce.”²⁰¹ During the course of his study, Robertson recorded notable outbreaks of typhus and specifically the one which distressed Admiral Byron’s squadron. Seamen in his fleet began exhibiting symptoms of the fever in 1778 while they were in North America and once they reached St Lucia in January 1779, Byron was forced to land a portion of the 1,223 sick men suffering predominantly from typhus.²⁰² Worst were the outbreaks of typhus at sea in cold weather, N.A.M. Rodger asserts. An epidemic during the hard winters of 1739-

²⁰¹ Robert Robertson, *Observations on Jail, Hospital or Ship Fever, from the 4th April 1776 until the 30th April 1789 made in various parts of Europe and America and on the Intermediate Seas* (London: n.p. 1789).

²⁰² Coriann Convertito’s *The Health of British Seamen in the West Indies, 1770 – 1806* (D. Phil, University of Exeter, 2011), 77.

1741 “wrecked the navy’s mobilisation, with men falling sick faster than they could be recruited.”²⁰³

Ships built mid-century all had similar characteristics. With the exception of the upper deck, all middle, lower and orlop decks were enclosed. The only ventilation was from the gun hatches, which could only be opened in good weather. People did not wash their clothes or bed sheets, so mid-18th-century ships had dirty berths that provided ideal breeding grounds for body lice. Normally two seamen took turns sleeping in the same hammock no more than fourteen inches away from the next hammock. Lice flourished in these circumstances, and once they had infected a few people, they quickly multiplied across the entire crew. Nesting in the seams of worn clothing, lice use the natural body heat of a human as a source of warmth, and typically do not settle in clean or unworn clothing. The climate of North America was perfect for lice in mariners: in cold weather the sailors would huddle together for warmth, and the frigid air and water made it even less likely that clothes would be washed or changed. Blane commented that “...the greatest evil connected with clothing, is the infection generated by wearing it too long without shifting.”²⁰⁴ The Royal Navy was still reeling from the typhus epidemics of the last decade, when in November of 1739, 25,000 men were sent to hospital ships following a wide outbreak; 2,570 of these men died, and 1,965 deserted.²⁰⁵ In the early eighteenth century, a ship’s surgeon named Patrick Campbell published a pamphlet entitled *Occasions of Sickness in Fleets and Ships of War which come not within the verge of Physick or Surgery at sea, but come wholly under the Cognizance of Great Officers on shore Principal Officers att Sea*, which advocated preventative medicine in terms of clean clothes and bedding. James Lind later advocated

²⁰³ N.A.M. Rodger, *The Command of the Ocean* (London: WW Norton & Company, 2005), 308.

²⁰⁴ Blane, *Disease of Seamen*, 311.

²⁰⁵ Daniel Baugh, “The Eighteenth Century Navy as a National Institution” in *The Oxford Illustrated History of the Royal Navy* (London: Oxford University Press. 2002) 140.

fumigating clothes and the provisioning of “soap, tubs, and proper conveniences for bathing”.²⁰⁶

A third suggestion was for a uniform for the ship’s crew. Lind writes: “I shall further suggest that if the seamen in H.M. service were put into an uniform seahabit...each man would at first go cleanly and neatly on board H.M. Ships; and by the proper care of the officers in frequently inspecting their apparel be kept so constantly.”²⁰⁷ Lind, with remarkable acuteness, predicted that unsanitary clothes and general uncleanness would lead to typhus outbreaks. In *An Essay on the Most Effectual Means of Preserving the Health of Seamen*, Lind warns about dirty clothes coming from prisons, specifically mentioning Newgate and guardships. He writes:

The most effectual preservative against this infection, during a press, would, perhaps, to be to appoint a ship for receiving all ragged and suspected persons, before they are admitted into the receiving guardships. These ships should be furnished with slops, shirts, bedding, and all the necessary articles of seamen's apparel, with soap, tubs, and proper conveniences for bathing, and with a room upon deck for fumigating of clothes. Every suspected person, whether imprest at sea, or on shore, should be first put on board of her ; their stay in her, however, should be short, as soon as they are stripped of their rags, well washed and cleaned, they should be supplied with new clothes and bedding and be sent on board the receiving guardships. Such of their apparel as appears tolerably good ought to be cleaned, or if necessary fumigated with brimstone, and returned to them, but it will be absolutely necessary to destroy all filthy rags, and all such clothes as are brought from Newgate or other prisons.²⁰⁸

An outbreak on the ship *Pompee* shows how typhus could lay low a ship’s crew. According to her surgeon, the first sign of the disease appeared in two men ‘who were in the habit of frequent intoxication.’²⁰⁹ Their symptoms consisted of vomiting, a foul tongue, a quick pulse, and pain in the head, back and loins. One of the men died the following day, while the other, in the interest

²⁰⁶ James Lind, *Treatise on the Scurvy*. See an excellent summary of Lind’s theory of scurvy in W. McBride, ““Normal” Medical Science and British Treatment of the Sea Scurvy, 1753–75’, *Journal of the History of Medicine and Allied Sciences*, 46 (1991), pp. 160–63.

²⁰⁷ James Lind, *Health of Seamen*, n.p.

²⁰⁸ Lind, *An Essay on the Most Effectual Means of Preserving the Health of Seamen*. Chapter 1, “Of Impressed Men”, 6.

²⁰⁹ Convertito, 74.

of the remainder of the crew, was sent to sick quarters at Dartmouth. Within a week, several other seamen from the ship were taken ill with typhus and numbers increased on a daily basis. The ship was fumigated in order to purify the air, and the crew continued to use ‘windsails of large dimensions’ down the hatchways. In spite of the efforts made to impede its circulation, it appeared as though nothing could stop it. James Wilkes, the surgeon, deduced that the fever originated in the men’s filthy bedding which was ultimately destroyed.²¹⁰

Uniforms would not be instituted in the Royal Navy until 1857. In the eighteenth century, all the Admiralty would agree to was the issue of hospital uniforms to dissuade desertion. Since the men pressed would only serve for the duration of the hostilities, it was viewed as a waste to spend money on clothes for them. The idea of soap was considered novel, and it was not included in ship-board hygienic practices until the 1780s.²¹¹ Medical theory stated that ship’s fever arose from “corrupt air”, produced by crowded living situations or from putrefying matter. According to eighteenth-century medical theory, humans constantly exhaled matter, in their breath and through the pores. This confined matter could become poisonous and cause disease in those who inhaled it, also by respiration or through their pores.²¹²

Despite the warnings of naval surgeons like Lind that a rigid code of personal hygiene could correct the conditions in which typhus occurred, the naval administration reacted slowly, likely because they remained attached to the idea that the infection was caused by decay and foul air. Their efforts were primarily focused on cleaning ships instead of crews. Other than attempt to cull infected recruits and to provide others with clean clothes as soon as they were enlisted, the administration did little in the early years of the war to improve the hygiene of the fleet as a

²¹⁰ Ibid.

²¹¹ Lloyd, C, J.L.S. Coulter, and J. Keevil. *Medicine and the Navy* , Vol 3, 79.

²¹² Charters, *Imperial State*, 45.

whole. Whatever was accomplished was typically the result of the work of individual ships' officers. A common treatment for typhus at this time was the administration of a powdered mercury compound listed in medical textbooks at the time as calomel. Believed to be able to purge bodies of unwanted diseases, it was used to treat yellow fever, syphilis and 'ship's fever', or typhus. It was also used for preparation prior to smallpox inoculation, purging the body to ensure it was prepared for the transmission of the disease. Calomel did have a purging effect on the body, as it was a potent laxative which caused complete evacuation of the bowels, and also vomiting. It would also lead to mercury poisoning, which carries some of the symptoms of scurvy such as rotten gums and blackened teeth, leading to possible confusion between the two sicknesses. It would take months for the symptoms of mercury poisoning to appear, often manifesting itself late in the voyage as the sailors and soldiers were about to disembark onto provincial shores.

Smallpox is spread by airborne droplets through the respiratory tract. It is easily transmitted among tight sleeping berths, where a crew could also be exposed to infected persons, clothes, and bedding. The disease was also highly contagious in the crowded and unsanitary living situations typical of urban centres. During the Seven Years War, smallpox was endemic in London; the Bills of Mortality show deaths from smallpox every year, with epidemics peaking every two to three years. Smallpox "inoculation" had been introduced to England in 1721 by Lady Mary Wortley Montagu and was used in the royal family, but it had little impact on the British populace at the time.²¹³ Developed centuries earlier in China and the Ottoman Empire, inoculation consisted of introducing matter from a relatively benign case of smallpox under the skin or into the nose of an uninfected person, with the objective of causing a less deadly form of

²¹³ Isobel Grundy, 'Montagu, Lady Mary Wortley (bap. 1689, d. 1762)', *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

the disease and immunity to later attacks. It was a risky undertaking, and the safer and more effective cowpox “vaccination” against smallpox was not introduced by British physician Edward Jenner until 1798.²¹⁴ However, public support for inoculation in Britain in the mid-eighteenth century was stronger than in France, where after a poorly-controlled experiment it was banned by the Paris Parliament in 1763.²¹⁵ Historians have assumed that new British recruits were inoculated upon joining the army, but it was not until the 1770s that inoculation of smallpox become widespread in Britain when the responsibility fell upon the local parishes to immunize the poor and labouring classes.²¹⁶ No surviving enlistment records from the Seven Years War indicate that smallpox inoculations were ever performed. Consequently, sailors arriving in North America in the late 1750s and early 1760s would, by and large, not have been inoculated against smallpox. It is likely that many sailors arriving would have a naturalized immunity to smallpox, having survived the disease in childhood in the large urban environments.

The British Navy had a great many men from lower-class, labouring and low-skilled backgrounds, and especially from urban centres such as London. The population densities of these towns were high enough to maintain endemic levels of smallpox; however, recent examination of these figures suggests that two out of nine sailors entering the British Navy did not have immunity to the disease.²¹⁷ The proportion of those vulnerable was augmented by the incorporation and impressment of provincial sailors. Colonial North Americans would likely not have suffered from smallpox prior to the Seven Years’ War. The largest population areas, including New York, Boston, and Halifax, did not have the population density sufficient to

²¹⁴ Derrick Baxby, ‘Jenner, Edward (1749–1823)’, *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

²¹⁵ Hervé Bazin, *Vaccinations, A History*. (n.p: John Libbey Eurotext, 2011), 44.

²¹⁶ See Genevieve Miller, *The Adoption of Inoculation for Smallpox in England and France* (Philadelphia: University of Pennsylvania Press, 1957); Peter Razzell, *The Conquest of Smallpox: The Impact of Inoculation on Smallpox Mortality in Eighteenth-Century Britain* (London: Caliban, 1977).

²¹⁷ Charters, *Imperial State*, 43.

maintain smallpox, and thus to provide a naturalized immunity. Although the North American colonies had suffered from previous epidemics, most populous centres avoided outbreaks for up to twenty years at a time, and as a result, would have been vulnerable to a mass importation of the disease. It is unlikely that the Americans who feared smallpox would have been happier being inoculated, as many were as afraid of inoculation as of smallpox itself (since unlike vaccination, inoculation potentially transmits the actual disease in its full strength). The operation was risky and dangerous at best, practiced only in the immediate threat of a smallpox epidemic. Not only could an inoculated individual end up suffering from a severe or fatal form of the disease, but also once inoculated the patient was a source of infection. Inoculated patients were carefully sequestered for the duration of the disease and its incubation, and were advised to follow a diet and bleeding regimen before and after the procedure.²¹⁸

Scurvy

Scurvy acquired aboard ships resulted from the long voyages that were first undertaken in the fifteenth and sixteenth centuries, when men were beginning to traverse the oceans seeking new ways to the East. Problems arose in the health of seamen and became more serious the longer they were away from land. There was no universal agreement on the cause or the means of prevention of scurvy, and agents such as humidity, polluted air, and cold were all considered to be potent factors and as important as inadequate diet. It was not until 1747 that Lind, while serving as a surgeon in the 74-gun ship *Salisbury*, carried out a controlled experiment that demonstrated once and for all that citrus juices were specific in the treatment of scurvy. However, it was not until much later that Lind's recommendations were generally adopted. His

²¹⁸ Charters, *Imperial State*, 29.

handbook, *A Treatise on Scurvy*, was published in 1754, but not until forty years later were administrative measures taken by the Admiralty to put his recommendations into effect. In *A Treatise of the Scurvy*, Lind made a dedication to George Anson. The preface reads

The subject of the following sheets is of great importance to this nation; the most powerful in her fleets, and the most flourishing in her commerce, of any in the world. Armies have been supposed to lose more of their men by sickness, than by the sword. But this observation has been much more verified in our fleets and squadrons; where the scurvy alone, during the last war, proved a more destructive enemy, and cut off more valuable lives, than the united efforts of the French and Spanish arms.²¹⁹

Anson's voyage around the world between 1740-1744, is well known as being a disaster because of the onset of scurvy. Of the 510 men who composed the crew of his flagship *Centurion*, only 130 returned home.²²⁰ Although distempers with similar symptoms had been cited in Roman military records during their early marches across northern Europe, scurvy became associated with the sea, and became known as the mariners' disease. Symptoms remained consistent from the legionnaires' marches in antiquity through the records begun in the age of sail. In 1596, British naval surgeon William Clowes described the symptoms as follows:

...[Their] gums were rotten even to the very roots of their very teeth, and their cheeks hard and swollen, the teeth were loose neere ready to fall out...their breath a filthy savour. The legs were feeble and so weak, that they were not scarece about to carrie their bodies, Moreover they were full of aches and paines, with many blewish and reddish staines or sports, some broad and some small like flea-biting²²¹

We know today that a lack of key vitamins caused scurvy, but it was not until the early twentieth century that the true cause was discovered. There was no consensus among eighteenth-century physicians as to the cause of scurvy, with theories varying wildly, including the suggestions of

²¹⁹ Lind, *A Treatise on the Scurvy* (London: n.p. 1753) i-ii.

²²⁰ For a concise catalogue of Anson's journey, see Stephen Bown's *Scurvy*, 47-71.

²²¹ Stephen Bown, *Scurvy* (New York: Thomas Dunne Books, 2005), 34.

too much hard work or, by contrast, not enough.²²² A letter to the *Gentleman's Magazine* in 1756 asserted that scurvy was not so prevalent in the merchant marine as in the Royal Navy, for the reason that in the navy, sailors could avoid exercise and hard labour and instead indulged in “an idle, lazy life at sea.” The letter concluded, “Till such or other means are fallen upon to discourage indolence and laziness, we may ever expect to hear, that large rates in particular are harassed with the scurvy, when all trading vessels keep constantly healthy.”²²³ Rodgers estimates that ships spent more than half of their time in port during this period, and that cold weather and difficulty in procuring supplies indicated that ‘refreshment’ was not provided to the British sailors in North American ports.²²⁴ In March 1756, a letter to John Campbell, 4th Earl of Loudoun, indicated that “...our Numbers are greatly diminishing daily by the Scurvy which proves Mortal...those doing Duty are so inantated, that they look like Spectres than Men.”²²⁵ On 28 September 1759, ten days after the Battle of Quebec, Brigadier-General James Murray ordered returns “...of such men as are so bad of the scurvy as to render them unfit for any duty.”²²⁶ In March 1760, Lieutenant Malcolm Fraser noted that “...the scurvy becomes every day more general. In short, I believe there is scarce a man of the Army entirely free from it.”²²⁷ Non-naval physicians were inclined to discount the effects of scurvy in ships, and to attribute the poor state of health of seamen to the professional incompetence of sea surgeons. In 1685, the authoritative English physician on domestic epidemic diseases and fevers, Thomas Sydenham,

²²² Stephen Bown, *Scurvy* 27, medical trials at the time suggested that the cure for a scurvy caused by laziness was rigid and backbreaking work. Consequently, the sailors put under this health regime expired in great numbers.

²²³ *Gentleman's Magazine*, September 1756.

²²⁴ N.A.M. Rodgers, *Wooden World*, 37-39.

²²⁵ Paul Kopperman, “The British Army in North America and the West Indies, 1755-83,” in *British Military and Naval Medicine, 1600-1830*, Geoffrey Hudson, ed. 70.

²²⁶ John Knox, *An Historical Journal Of The Campaigns in North-America, for the Years 1757, 1758, 1759, and 1860: Containing The Most Remarkable Occurrences of that Period; Particularly The Two Sieges of Quebec*. 28 September, 1759.

²²⁷ Malcolm Fraser, *Extract from a Manuscript Journal, related to the Siege of Quebec in 1759, kept by Colonel Malcolm Fraser, then Lieutenant of the 78th and Serving in that Campaign* (Quebec: Literary and Historical Society of Quebec, 1866), 29.

went so far as to say that "... the two great subterfuges of ignorant physicians were 'malignity and the scurvy', which they blamed for disorders and symptoms often owing to their own ill management."²²⁸ According to Lind, disease, and especially scurvy, affected some types of individuals more than others, and he believed that a melancholic temperament and "laziness and indolence of disposition, and from thence a neglect of using proper exercise, or a sedentary and inactive life," were contributing factors in one's susceptibility to scurvy, as a person who was depressed, lazy, and inactive had a lack of firmness in the body and in digestion.²²⁹

The medical majority believed that it was a lack of fresh provisions,²³⁰ although the disease was believed to manifest not because of a lack of vitamins, but rather due to the onset of putrefaction.²³¹ Eighteenth-century medical authorities stated that putrefaction was a natural state that a body suffered if it was not constantly refreshed by eating, drinking, and 'natural evacuations', including defecation and perspiration. The life of a seaman in the eighteenth century, contemporary belief stated, was such that putrefaction could easily set in because of moist, cold and unclean air that sailors were exposed to in their work and sleep, and also their diet, which was based primarily on heavy salted meats and unleavened bread. In his famous treatise on scurvy, James Lind identified the damp and cramped conditions onboard as the

²²⁸ F. Ellis, "Victuals and Ventilation and the Health and Efficiency of Seamen" *British Journal of Industrial Medicine*, 5, (1948), 187.

²²⁹ Charters, *Imperial State*, 23.

²³⁰ Charters notes in *Disease, War, and the Imperial State* that one should note that the emphasis was on fresh meat: eighteenth-century references to "fresh provisions" do not necessarily include fresh fruits or vegetables. Salted meats were considered part of the fundamental cause of disease; fresh meat was considered conducive, if not essential, to the men's health. Standard victualing practice in the British Army and Royal Navy was for salt meat to be preserved in large amounts of salt and brine for months if not years; soldiers and sailors were instructed to boil the meat a number of times while scraping off the salt in order to render it softer and more easily digestible. According to the eighteenth-century theory of putrefaction, salted meat was an especially unhealthy part of a soldier's or sailor's diet. For more, see Charters, 124.

²³¹ Charters, 'The Intention is Certain Noble': The Western Squadron, Medical Trials, and the Sick and Hurt Board during the Seven Years War (1756–63). 22.

“principal and main predisposing cause” of scurvy.²³² By the symptoms of swollen limbs, spongy gums, and the fetid smell of urine, ulcers, and breath, Lind determined scurvy to be a disease of putrefaction, caused by the blockage of perspiration and a diet that impeded proper digestion. In cold climates, Lind recommended exercise to encourage insensible perspiration. He writes that “...experience shews, that flesh long salted is of very difficult digestion. It requires perfect health, together with exercise, plenty of diluting liquors, vinegar, and many other correctors, to subdue it in the first passages.”²³³ Vegetables and acids, such as vinegar, and especially acidic fruits, such as lemons and oranges, helped break down what Lind called “a gross and viscid [viscous] diet.”²³⁴ Even more helpful were those substances that preserved the body from putrefaction by their “fermentative tendency.” This tendency Lind identified not only as common to vegetables, but as found also in wine, beer, cider, and spruce beer, as demonstrated in his various trials and experiments. Regular stops in harbour were therefore the optimal preventative of sickness. This is demonstrated in the terminology used: such stops were called ‘refreshments’, both for the ships themselves (being scraped and cleaned), and for the men. Specifically, time on shore provided fresh air, exercise, and fresh provisions: all agreed that these were the best cures, as well as the best preventatives, for scurvy.²³⁵ Beginning in the late 1750s, officials began to supply the Western Squadron with vegetables, though the amount sent and the regularity with which vegetables were transported are difficult to ascertain. While regular records of fresh meat received on board exist, and such shipments were carefully noted, the arrival of vegetables does not appear to have been given the same importance. For example, the charge for vegetables was somewhat muddled, as the pursers charged the vegetables as if they

²³² Lind, *A Treatise on Scurvy*, 64.

²³³ Lind, *A Treatise on Scurvy*, 232.

²³⁴ Lind, *A Treatise on Scurvy*, 231.

²³⁵ Charters, ‘The Intention is Certain Noble’: The Western Squadron, Medical Trials, and the Sick and Hurt Board during the Seven Years War (1756–63). 23.

were “a gift to the seamen,” and hence not on their accounts, while the Board appears to have charged the cost to each ship’s account.²³⁶ Improvements after the arrival of vegetables were immediate and dramatic, with a surgeon reporting that “...they began dayly to grow more healthy. The Scurvy which rag’d in a most extraordinary manner amongst them is now disappearing...I shou’d have lost numbers had not the Vegetables come to our relief.”²³⁷ Hawke and Admiralty officials were obviously pleased when such fresh provisions reached the fleet. Writing to the Admiralty on 28 August 1759, Admiral Hawke commented, “The little fresh meat we have had has already showed itself in very salutary effects.”²³⁸

Diet, Diarrhoea, and other Sea Diseases

Feeding the sailors in the Western Squadron was a herculean task. Boscawen’s Western Squadron sent to North America at the outset of the war had about 9,500 sailors, and did not touch land for months. The food could only be preserved by pickling, salting and drying, and so the Admiralty picked food that would tolerate these preservation methods and remain edible for many months. The diet of a sailor in the Royal Navy during the Seven Years’ War would consist of salted meat, dried peas and beans, beer, cheese, and hard, durable biscuits. Fresh vegetables were not customarily available during long voyages and were generally limited to the seamen’s time in port. This diet, instituted in 1733, would more or less remain unchanged until the introduction of canning in the nineteenth century.²³⁹ The health and contentment of the Royal Navy was dependant on the daily diet offered to the sailors. Poor quality and quantity of victuals posed a threat to order on ships and within the fleet, and was one of the leading causes of mutiny.

²³⁶ Charters, *Disease, War, Imperial State*, 128.

²³⁷ Kopperman, “The British Army in North America and the West Indies, 1755-83”, 70.

²³⁸ Charters, *Disease, War, Imperial State*, 128.

²³⁹ Janet MacDonald, *Feeding Nelson’s Navy: The True Story of Food at Sea in the Georgian Era* (London: Chatham Publishing, 2004), 10.

By the standards of the poor in eighteenth-century Britain, a sailor had a privileged diet. They could expect to eat meat four times a week. They had a hot dinner daily, and in an age in which a sailor could and did complain freely, there was little noise made about food.²⁴⁰ In 1677, Samuel Pepys wrote that:

Englishmen, and more especially seamen, love their bellies above anything else, and therefore it must be remembered in the management of the victualing of the Navy that to make any abatement in quantity or agreeableness of the victuals is to discourage and provoke them in the tenderest point, and will sooner render them disquieted with the king's service, than any other hardship that can be put upon them.²⁴¹

The storage of provisions in eighteenth century ships was far from ideal, but there was little in the way of an alternative. Meat was typically salted and packed into large casks for distribution to the ships. Once on board, these casks were susceptible to both heat and vermin infestation and often served to the seamen in that condition.²⁴² Water supplies were stowed in a similar way and equally prone to spoiling, as claimed by Admiral Hawke for the reasons of the sickness befalling the Western Squadron at the outset of the conflict. The diet supplied by the Admiralty was plain and restricted in range, but provided enough calories for the daily hard work on ships. Food was cooked in copper pots. The officers may have been lucky enough to be on a ship that would allow a small amount of baking, but the food for the general crew was all boiled. Rodger suggests that sailors were generally conservative eaters, rejecting new foods introduced as “novelties”, citing the introduction of porridge instead of biscuits, and the trouble Captain Cook had with introducing new fruits and vegetables to his crew, and the general aversion to

²⁴⁰ The major exception to this is the Spithead and Nore Mutinies of 1797. One of the subsidiary requests of the Mutineers being that “...Our provisions be raised to the weight to sixteen ounces to the pound and a better quality, [and] there be a sufficient quantity of vegetables.” The older historiographies suggest that food had a large part to play in the mutinies, as seen by Conrad Gill’s *The Naval Mutinies of 1797* (Manchester, 1913), 98, and C Parkinston’s *Edward Pellew, 1757-1833* (London, 1934), 189; however, Janet MacDonald suggests that food was just an afterthought, where the main cause of complaint were wages. See *Feeding Nelson’s Navy*, 13.

²⁴¹ Rodger, *Wooden World*, 82.

²⁴² Convertito, *Health of British Seamen*, 75.

sauerkraut as a remedy to scurvy.²⁴³ They particularly did not like foreign substitutes for staple foods, such as chick peas or yams instead of green peas and potatoes.

Due to the heavy salting required for preservation, vitamins and nutrients essential to regulate their digestive systems and bowels were lacking from the sailor's diet. As a result, seamen often suffered from diarrhoea and dysentery. There is relatively little in the way of official scholarship on these shipboard diseases. British historian David Boyd Haycock theorizes that dysentery was simply too commonplace to have attracted much attention from modern historians of medicine, and it may not have had the shock factor of typhus or smallpox.²⁴⁴ Simple diarrhoea resulted from a viral, bacterial or parasitic intestinal infection. Generally, infection circulated through the fleet mainly because of improper handling of food or contamination of water. Seamen were considered to be suffering from diarrhoea if they had three or more loose bowel movements a day, a condition viewed as being common and straightforward to treat on board ship. The biggest threat to the sufferers was the risk of severe dehydration. No official cure for diarrhoea existed: the sick were simply placed on a restricted diet and given medicines to settle the intestinal spasms. One of the medicines given was calomel, the aforementioned mercury-based purging agent. Often diarrhoea became more troublesome by evolving into dysentery. It is important to note that it was unknown until the very end of the nineteenth century that the common appellation of 'dysentery' was actually being applied to two distinct diseases, now clearly distinguished as 'bacillary' and 'amoebic' dysentery. The post-period definition of the two types of dysentery causes potential confusion in a modern discussion of historical sources, and inevitably complicates interpretations of the cause of the disease. It is highly probable that severe outbreaks of dysentery were the bacillary type, suggesting men were

²⁴³ Ibid, 86.

²⁴⁴ D.B. Haycock, "Exterminated by the Bloody Flux", *Journal for Maritime Research*, 2002, 18.

exposed to contaminated or impure water.²⁴⁵ Though there were designated toilets aboard the ships, naval accounts record that feces would oftentimes find their way to the ship's deck, the bilges, or the ship's hold, where the foodstuffs were stored. Bad weather had the ability to upturn bilges and waste onto decks, as Lind writes that during storms:

...the spray of the sea raised by the violence of the wind, is dispersed over the whole ship so that people breathe as it were in water for many weeks together. The tumultuous waves incessantly breaking upon the decks, and wetting those who are upon duty as if they had been drenched in the sea, are also continually sending down great quantities of water below; which makes it the most uncomfortable wet lodging imaginable; and from the labouring of the ship, it generally leaks down in many places, directly upon their beds.²⁴⁶

All bowel diseases had the potential to be fatal. Dysentery was the most likely to kill seamen because of the severe nature of the symptoms. Medical theory of the day typically accused 'putrid blood' of causing dysentery, although John Coakley Lettsom, a naval surgeon who spent time in the West Indies during the middle of the eighteenth century, blamed 'fear and other passions of the mind' as the catalyst for bowel complaints and also claimed that thunder and lightning frightened some men into experiencing diarrhoea.²⁴⁷ One seriously considered cause was stellar and planetary events, which had a long tradition as possible causes of plagues in general. The potential influence of planets on disease, particularly fevers, remained of interest to physicians throughout this period, helped in the early eighteenth century by the popularity among British physicians of Newtonian physics and the gravitational theory of action at a distance.²⁴⁸ For example, Richard Mead (1673-1754), a leading Newtonian philosopher and physician to George I, published *A treatise concerning the influence on the Sun and the Moon*

²⁴⁵ Ibid.

²⁴⁶ Lind, *A Treatise on the Scurvy*, 69.

²⁴⁷ Convertito, *Health of British Seamen*, 76.

²⁴⁸ Haycock "Bloody Flux", 21.

upon human bodies. There he explained that epidemic fevers were caused by 'some noxious qualities of our atmosphere' and that 'it seems reasonable to suppose' that such changes were influenced by the moon.²⁴⁹

Venereal diseases were infamous in the age of sail, though it is difficult to gauge exactly how many people in the Royal Navy were infected. Certainly "The Pox" as it was called, was well known and extremely prevalent in the eighteenth century.²⁵⁰ This was particularly so in the ports, where seamen caught it on shore leave, or from prostitutes brought to the ship at anchor. The standard medicine used to treat venereal diseases was calomel, but the reserves were limited and viewed as needed to treat more serious diseases. Furthermore, the Admiralty considered it as a voluntary disease and the fault of a lack of personal responsibility. As a result, all sailors who were treated were charged fifteen shillings per application to be paid to the surgeon. This practice was unpopular with seamen, who began to refuse to report the disease. This led to inaccurate numbers and also laid low seamen when the venereal diseases worsened, ensuring that the cure would be both more difficult and more expensive later on. Surgeons were critical of the practice as well, not only because of the worsening of the undeclared cases, but also because patients would not honour a promise of payment when there were no coins easily able to be exchanged.²⁵¹ Thomas Trotter claims that the practice was abolished in accordance with his advice in 1795, stating: "Thus terminated a practice illiberal from its institution, inhuman in its practice and impolitic from its continuance. It forms an epoch in naval improvements, for hundreds of seamen have annually fallen victim to its effects."²⁵²

²⁴⁹ Ibid.

²⁵⁰ Lloyd and Coulter, *Medicine and the Navy, 1200-1900*, 359.

²⁵¹ Ibid.

²⁵² Trotter, *Medicina Nautica*, 113.

Conclusion

Most fatalities aboard ships of the Royal Navy in the Seven Years' War were not in battle but rather from illness and disease. Sick men brought on board from guardships or jails would spread typhus or smallpox among the crew, their burden exacerbated by the poor sanitary conditions aboard the ships. Ships built during this period were over-crewed, under-sized, and unhygienic. Small sleeping berths, decks often awash with bilge water and human waste, and clothes rarely washed in the cold salt water, created grounds rife for a host of diseases. The deadly typhus or "ship fever", also known as "gaol fever", was believed to be caused by bad air, but as it was in fact spread by body lice moving among the tight-packed sailors, there was little relief until surgeons like Lind and Blane began such new hygienic initiatives as fumigation of new recruits' clothes before they came aboard. Scurvy, diarrhoea, dysentery and venereal diseases also contributed significantly to loss of life from preventable causes during the Seven Years' War. Despite the massive loss of life to disease, the Royal Navy was not, as popular myth suggests, indifferent to the health of their seamen. Manning the navy was a continuous problem, and illnesses and deaths among the sailors were a recognized contribution to that dilemma. Naval health was a high priority for the Admiralty and its subordinate bodies, which displayed remarkable flexibility and attention to medical research. Study of these illnesses crossed national borders, with the surgeons and physicians from Britain and France exchanging ideas and discoveries.

The ad-hoc nature of British medicine in the eighteenth century was both a boon and a hindrance to the emerging research into disease and hygiene. The unregulated and decentralized nature of the emerging British medical profession allowed for amateur surgeons and apothecaries to find individual and experimental solutions to eighteenth century medical problems. This

allowed for multiple theories to be tested in scientific and empirical structures, such as James Lind's experiments into Scurvy on the HMS *Salisbury*. The sheer number of medical theories presented to the Hurt and Sick Board presented a cacophony of information, and during a time of war, the Admiralty boards did not have the time and resources able to enact immediate reform. Lind had no taste for lobbying and politicking at the Admiralty, or at metropolitan scientific and medical societies. His hesitance and the circumstances of the conflict meant that he made no immediate impact on medical or naval medicine during the Seven Years' War, but his books were widely translated and quoted, and his time spent at Haslar were influential years at the hospital.²⁵³ Medical authorities later in the century credit him and his research for beginning new thought for both hygienic and medical practices in the Royal Navy.²⁵⁴ Though discoveries may have not been instituted across the entire navy right away, as in the case of lemon for scurvy, or fresh uniforms for typhus, the Sick and Hurt Board took their duties seriously, and spent a great deal of time and resources on combating these shipboard ailments.

²⁵³ Bartholomew, "Lind, James", n.p.

²⁵⁴ Frederick Thomson, *An Essay on the Scurvy: shewing Effectual and Practicable means for its Prevention at Sea. With some Observations on Fevers, and Proposals for the more Effectual Preservation of the Health of Seamen* (London: n.p., 1790), pg 316

THREE

“THE USELESS MAY BE SENT HOME”: SICKNESS AND WARFARE IN NORTH AMERICA

Fresh provisions now and then and a constant supply of spruce beer keeps the army in good health and they work well which helps much towards the health of the provincials, who if left to themselves would eat fryed pork and lay in their tents all day long. – Jeffrey Amherst²⁵⁵

The notion of Britishness and the “British character” are tangled concepts, particularly in the eighteenth-century. The century began with the unification of England and Scotland in the 1707 Act of Union, and ended with the American Revolution, providing bookends for the study of characteristics attributed to the British people. Modern historiographical studies are conflicted over exactly what Britishness meant and to what degree it was felt to be a unifying characteristic following the Act of Union. The noted historian Linda Colley suggests that as the century progressed, a sense of Britishness was superimposed upon the national identities of the English, Scottish, Welsh and Irish. She identifies several factors as helping forge Britishness during that time, including religion, since the British saw themselves as Protestants combating Catholic enemies; financial profit and cultural exchange accruing from imperial commerce and peripheries; and near-constant warfare.²⁵⁶ She argues that Britain’s conflicts in the eighteenth century were crucial to the development of a multi-dimensional British identity. At no point does Colley suggest that the British people ever lost their separate identities, but rather that Britain was united in a common hostility for outsiders. She states that “...Britishness was superimposed over an array of internal differences in response to contact with Other, and above all in response

²⁵⁵ Charters, *Disease War, Imperial State*, 27.

²⁵⁶ Colley, *Britons: Forging the Nation*, for more, see Hubley, 20.

to conflict with the Other.”²⁵⁷ The fact that the enemy was Catholic, and that the French and Spanish state was perceived as being despotic, helped create a British self-image as a bastion of liberty and Protestantism. Paul Langford stresses that the English did not universally welcome the notion of Britishness, though they might use the term in a patronizing way to distance themselves from others.²⁵⁸ Stephen Conway proposes that prior to the Seven Years’ War a “...unifying sense of Britishness made only slow and fitful progress towards capturing hearts and minds”, as opposed to the “. . . persistence of localism and the continuing appeal of older national loyalties.”²⁵⁹ He supports Linda Colley’s argument that the most important aspect of the creation of British identity was the wars against Catholic France and Spain. Within Royal Navy ships, nominally “British melting pots” as Conway describes them, there were stratifications among the officers and crew based on ethnicity and class. The notion of Britishness could be malleable, and able to fit a narrative when it was needed. One example is that of Edward Thompson, an officer from the gentry whom served as a lieutenant aboard the *Dorsetshire* in August, 1756. In personal correspondence, he referred to the Scottish seamen and officers as criminals and compared them to African slaves, though later, he mentioned that the men on the ship were “. . . fired with British courage.”²⁶⁰

While personal concepts of Britishness and identity were subjective and inconsistent, the emerging notions of a “British character” provided fertile testing grounds for military science and medicine. Though the scholarship shows that the British contrasted themselves primarily with Catholic France and Spain, there was also discord between British-born soldiers and the colonial forces in the Maritimes and New England, who were nominally Protestant but often

²⁵⁷ Colley, *Britons*, 6.

²⁵⁸ P. Langford, *Englishness identified: manners and character, 1650-1850* (Oxford: Oxford University Press, 2000), 12-3.

²⁵⁹ Conway, *War, State, Society*, 216.

²⁶⁰ Hubley, 57.

Puritan.²⁶¹ Within the military there were strains from both sides: British bodies needed to adapt to the new climates and locales, and American colonial soldiers needed to be taught to face the rigors of large-scale European combat. Within the scholarship these concerns are depicted as a matter of dominance and racial hegemony,²⁶² but for the emerging conflict in North America, they were practical concerns, motivated by the serious desire to conserve sailors and soldiers, as well as how to conserve the local provincial forces, and to maintain the goodwill of local governments and populations.

Rates of disease and the difficulties of treating them were worse in colonial environments. Not only did British forces have to contend with a foreign climate and its specific diseases, but because of waterways that would freeze, and other unreliable and undeveloped transportation routes, traditional supplies and adequate supply methods were difficult to procure, facilitating the outbreak of disease and foiling attempts at care and healing.²⁶³ Moreover, both the recruitment and the transportation of reinforcements proved difficult, creating a reliance on local colonial forces to augment British sailors and soldiers. Military historians have typically ignored the role of disease in campaigns, or dismissed the significance of contemporary medicine by judging it by present-day standards.²⁶⁴ The British military is traditionally depicted as being a small but well-trained and well-disciplined force, and British victory was often dependent on maintaining discipline during and after battles. In contrast, many of the provincial recruits came

²⁶¹ David Hall, "Toward a History of Popular Religion in Early New England." *The William and Mary Quarterly: A Magazine of Early American History and Culture* (1984): 49-55.

²⁶² For examples of imperial racial concerns, see Chakrabarti's *Materials and Medicine*, Chapter 4, and Anne McClintock's *Imperial Leather: Race, Gender, and Sexuality in the Colonial Contest*, Chapter 4.

²⁶³ For an in-depth study of the logistical problems facing the British expeditions to North America, see Ian Steele's *Warpaths: Invasions of North America* (New York: Oxford University Press, 1994).

²⁶⁴ Charters' notes that Neil Cantile's *A History of the Army Medical Department* (London: n.p. 1974), assumes no preventative medical care was attempted and others such as S.R. Frey, *The British Soldier in America* (Austin, 1981), similarly "...assume a low level of medical care due to 'Britain's reliance on an anachronous administrative system to supply its troops abroad', 29." Recent histories such as Anderson's *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754-1766* mention scurvy either not at all or only in passing, and assume no medical care was instituted to prevent scurvy's incidence.

from land-owning families, and most anticipated settling on their own farmland within a few years. They wished to sign up for a few years of service at most, and usually expected to return home every winter. Officers in North America found desertion increasing dramatically during the harvest months as soldiers left to return home to a family farm. The provincial soldiers were typically undertrained and relatively undisciplined, so a military directive often assigned them as labourers instead of soldiers. During North American campaigns soldiers and officials noticed that disease, including scurvy, distinguished between British regular and irregular troops: North American-born provincial soldiers suffered from higher rates of illness than their British-born counterparts.²⁶⁵ Their rural and colonial environments did not allow them to develop immunities to diseases, making them more likely to fall victim to typhus and especially smallpox. Scurvy, though not a disease that was transferable, was a serious concern amongst the sailors and soldiers in North America, particularly when the cold caused the ships to remain in port for months, or when it limited supply-gathering for local garrisons. These problems caused suggestions that British-born combatants were different than their North American counterparts.

Illness and temperament were inextricably linked in eighteenth-century medical theory.²⁶⁶ Medical and military men believed that higher rates of disease were the result of the sufferer's constitution and character. Eighteenth-century physician Richard Brocklesby theorized that the bad habits of a military life were the reason that smallpox was more virulent within an army than among a civilian population: "A greater relaxation of all sobriety and temperance is supposed to prevail, in all military life, than among other orders of men. It is therefore natural to conclude, that such a disease as the small-pox is more destructive, in every army in England, than any other

²⁶⁵ Charters, "Military Medicine and the Ethics of War", 274.

²⁶⁶ Roy Porter, *Bodies politic: disease, death, and doctors in Britain, 1650-1900* (New York: Cornell University Press, 2001), 171.

acute disease."²⁶⁷ Smallpox was thus one of the problems the British military associated with the undisciplined provincial troops, and it was yet another cause of provincial recruitment difficulties, troop shortages, and desertion. During the siege of Louisbourg in 1758, Captain Knox recorded in his journal: "...the troops have suffered considerably by sickness; but, though I am told so, I find, upon inquiry, the loss has been mostly among the Rangers and New England artificers, to whom the small-pox has proved fatal."²⁶⁸ It was perceived by the British that the provincials were more devoutly religious, perhaps because of their Puritan roots, and this was used as an official explanation of their hesitancy to accept inoculation. As inoculation was common among Native American and Black populations, it became known as a "heathen" practice in the Colonies, and the religious significance of tampering with God's plan rendered it problematic for some.²⁶⁹ Aside from the operational dangers, reports of disease among troops led to recruitment and morale problems, caused friction among colonial and allied civilian populations, and engendered doubt in the minds of allied governments and commanders. Troops were unwelcome in some provincial towns, and quartering and supplying soldiers could be difficult because of local fears of infection.²⁷⁰

²⁶⁷ Charters, *Imperial State*, 53.

²⁶⁸ Knox, *Historical Journal*, Entry of July 26th, 1758.

²⁶⁹ Ann Becker. "Smallpox in Washington's Army: Strategic Implications of the Disease during the American Revolutionary War." *The Journal of Military History* 6 (2004), 387. One clergyman questioned whether inoculation was a "distrust of God's overruling care," and another asked, "is not smallpox a judgment of God sent to punish us and humble us for our sins?"

²⁷⁰ Charters, *Imperial State*, 49.

British Identity and the Infection of Locals

According to Lind and Pringle, disease affected some individuals more than others.²⁷¹ In the investigation of diseases of populations, doctors borrowed and adapted causal models to explain individual sickness.²⁷² Surgeons and physicians were chiefly concerned with ways in which constitution, diet and climate affected disease rates. During North American campaigns, medical officials noticed that American-born soldiers suffered from higher rates of sickness than their British-born counterparts. This appeared to bear out widely held premises about the physical and temperamental differences between provincials and British soldiers. The first fleet of British ships to arrive in Halifax in the summer of 1755 was stricken with sickness and fever. It was likely that the illness was typhus, and it had been afflicting the fleet for the entire journey, but by that early stage of the war, it was unlikely that the impressment of sailors caused men to be sent from prisons or guardships. It may have been acquired from prisoners taken from the French fleet. An epidemic of smallpox and typhus reportedly broke out in Louisbourg in June 1755, and Admiral Boscawen was under orders to capture all French forces during his expedition to North America. On the 12th of July, Boscawen wrote that near half of his forces were sick with an “inflammatory fever”.²⁷³ Four days later, he wrote that “...our sick increase daily. We are now erecting tents and repairing houses for their reception on shore.”²⁷⁴ By September, illness had spread to Halifax, and it was reported that the people were “very sickly”. Following the

²⁷¹ In 18th century Medical knowledge, the Galenic humoral model formed a cornerstone of medical knowledge, and sought to explain racial differences based upon the different balance of the four humors. Humor theory was based on the difference between northern and southern climates, where people in northern climates had harder constitutions than those in the south. It’s unclear how, if at all, humor theory was applied to colonial Europeans in North America. Lind and Pringle do not shy away from writing of humors, but not in a context with white colonialists.

²⁷² Christopher Lawrence, “Disciplining Disease: Scurvy, the Navy, and Imperial Expansion, 1750-1825” in *Visions of Empire: Voyages, Botany, and Representations of Nature*, David Miller, ed. (London: Cambridge University Press, 2011), 81.

²⁷³ Marble, *Surgeons, Smallpox, Poor*, 48.

²⁷⁴ *Ibid.*

arrival of Boscowen's fleet to Halifax, the monthly death rate attributed to disease increased from September to November. The sickness continued in Halifax into early 1756, with captains writing that "...numbers of our people are so weak and sickly that they cannot be taken on board."²⁷⁵ Following the 1756 declaration of war with France, mobilization of troops increased to Halifax, and in 1757, there were about twenty thousand soldiers and sailors in Halifax, with a civilian population of about three thousand.²⁷⁶ Sickness spread throughout the region, starting first in Halifax, and then the peripheral communities. Provincial troops reinforcing and supplementing the British military forces would be sickly upon meeting with the battle groups, or would fall victim to fever or smallpox upon integration and fraternization with the European soldiery.

Surgeons and physicians stationed in North America noticed that provincials were growing sick at a rate far faster than Europeans. Dr. Richard Huck reported that provincial troops were of a weaker constitution than British regulars, and wrote to Pringle that the provincials were spoiled by their previous habits of living in luxury, saying "I don't know how to account for this extraordinary sickness among the provincials more than the regulars...they cannot stir in a morning without their tea or chocolate, and bear sleeping upon the ground very ill in place of a feather-bed. I do not know if it is owing to the pampered manner in which they are brought up, but they certainly have not the strength and stamina of Europeans."²⁷⁷ Relying on the already established link between disease and laziness or a weak constitution, medical officials stationed in North America posited that provincials were sicker because they were naturally less disciplined and energetic than British troops. In choosing such an explanation, officials

²⁷⁵ Ibid, 51.

²⁷⁶ Ibid.

²⁷⁷ Ibid, 40.

resorted to theories that were already common outside medicine. Jeffrey Amherst found himself frustrated by this natural disposition of provincial troops, complaining in his journals not only about their physical sickness, but also that they deserted far more easily and were distracted by thoughts of home. In his entry of 14 November 1759, he griped, “The Provincials have got home in their heads & nothing can stop them or make them do an Hours work tho’ the whole Country depended on it so I must sen[d] them all away.”²⁷⁸ Later, when describing the provincial Rangers, Amherst wrote “I am sorry to say I do not give the least Credit to any Ranger Reports, from all I have seen of them, they are the most Careless, Negligent, Ignorant Corps I ever saw, and if they are not beat on all Occasions I really cannot find out the reason why.”²⁷⁹

Provincials themselves noted that they were sicklier than Europeans. Captain Samuel Jenks from Massachusetts recorded that “The provincials begin to be very sickly. Two of our battalion died yesterday, and several officers and soldiers are very sick in our reg[iment].” Less than three weeks later he wrote: “The men in camp begin to die very fast, and its very sickly, there is about 1,200 men of the provincials now return’d unfit for duty, and great many more taken sick almost every day.” A day later he continued: “There is not above a third part of the men now in camp that are fit for duty, and dies more or less every day.”²⁸⁰ A letter to Pringle from a Dr. Kirkpatrick states that this was well known among the colonial forces. Kirkpatrick writes;

²⁷⁸ Amherst, Entry of 14 November, 1759, MG 18, L4.

²⁷⁹ Charters, *Imperial State*, 49.

²⁸⁰ Charters, *Imperial State*, 40-43.

Those who come from Europe are longer lived than the natives. This remark seems to extend to all the British Colonies in America; for Major Rutherford who had lived many years in New York, made the same remark viz, that the constitution of those who are born in that settlement is seldom so good as of those who come from England; and that neither the people of New York nor of New England can bear so much fatigue nor sickness as those who come from Great Britain²⁸¹

Smallpox was easily recognizable, and colonials understood that exposure to the disease led to infection, though the mechanism of contagion had not yet been proven medically. Provincials simply knew that smallpox was communicated between individuals and could also be contracted from inanimate objects used by those suffering from the illness. Smallpox epidemics were recurrent, devastating, and frequent, and mortality from the disease ranged from fifteen to fifty percent.²⁸² Like scurvy, smallpox was believed to affect a certain type of person more than another. Smallpox was thus another problem associated with undisciplined provincial troops, which meant that disease was lumped together with other reasons for troop shortages among provincials, such as laziness, lack of motivation, and being pampered. Writing from New York, Governor De Lancey explained to Pitt in 1759, “There is a great Backwardness in the Men of this Province to enlist arising from the sickness and deaths the last year, occasioned by the great fatigues, the troops in the pay of this Province underwent, yet I hope to have them nearly complete as soon as the Season can possibly call for their Service.”²⁸³ The tensions caused by the raising and quartering of large numbers of troops during the war, and their continued presence after the war, intensified provincial antagonism over the role of the army in the American colonies. In their shared experience of warfare and disease, alleged constitutional and moral

²⁸¹ Ibid, 41.

²⁸² Becker, "Smallpox", 385.

²⁸³ William Pitt, *Correspondence of William Pitt, Earl of Chatham* (London: Cambridge University Press, 1901), 76.

differences between American-born and British-born soldiers became both apparent and a cause for mutual frustration.

Around 1720, reputable physicians in Britain became acquainted with the practice of inoculation. This method consisted of transplanting pus from the pustules of a smallpox victim into an incision in the skin of a healthy person. The procedure resulted in a mild infection, with a much higher rate of recovery than was usual in cases of smallpox received through ordinary exposure to the infection. General acceptance of the practice was slow, however, and the procedure inspired violent controversy in some areas. Even in British urban centers where smallpox was endemic, inoculation campaigns caused alarm during this period: at Winchester in 1758, and again in 1763, apothecaries and surgeons publicly declared a boycott of inoculations “in order to put an entire stop to the distemper spreading again.”²⁸⁴ Unlike those who received a vaccination, a medical innovation introduced by Edward Jenner in 1798, inoculated individuals remained contagious throughout the period of their recuperation and could infect others with natural smallpox. After undergoing inoculation, the patient became contagious at the end of the twelve-day incubation period and remained so for two weeks, a shorter period than if the disease had been contracted naturally. Inoculation was not always successful and carried medical risks. Its use was controversial, particularly during the period of the Seven Years’ War. One of the most serious risks of inoculation was the tendency for smallpox to spread out of control if those persons inoculated were not effectively quarantined until all danger of infection had subsided. Without strict control of the procedure, the disease could actually be generated and spread. For that reason, inoculation was usually performed only during epidemics, or by trained doctors who isolated their patients as long as they remained contagious. Demand for new, elaborate

²⁸⁴ Charters, *Imperial State*, 46.

preparations thought to soften the disease's effects, drove up its price and kept it beyond the reach of poorer colonials.²⁸⁵ From the time the preventive measure was first adopted, proponents argued that entire towns, including those citizens who could not pay, should be inoculated, but few communities did so, citing concerns about cost and the suspension of trade that the inoculation period dictated.

As a result, widespread inoculation among the 30,000 troops scattered throughout North America during the campaign would have caused more problems than it offered solutions. As every inoculated soldier would have been infectious and unable to care for himself for a few weeks at least, general inoculation would have crippled the British forces, killed a portion of soldiers inoculated, and spread smallpox among camp followers and into nearby settlements. Moreover, it would have exacerbated existing provincial resentment of British military demands, if not motivating outright provincial refusals and mutinies.²⁸⁶ Throughout the Seven Years' War, outbreaks of smallpox and fever in North America were associated with soldiers and sailors. Communities seldom welcomed them, for fear of the spread of disease to their towns. In June of 1757, Henry Bouquet (who died of 'fever' eight years later) wrote that towns were "...so afraid of this Distempter that I was doubtful if they wou'd let us come in."²⁸⁷ Benjamin Gale wrote in a letter to John Huxham, published in the *Philosophical Transactions* of 1765:

²⁸⁵ Andrew Wehrman, "The Siege of "Castle Pox": A Medical Revolution in Marblehead, Massachusetts, 1764–1777." *The New England Quarterly* 82, (2009): 389.

²⁸⁶ Charters. *Imperial State*, 47.

²⁸⁷ Kopperman, "The British Army in North America and the West Indies, 1755-83", 63.

During the late war, the small pox was brought into divers towns, in this and the other colonies, by the return of our soldiers (employed in His Majesty's service, in the pay of the New England colonies) for winter quarters, and by seamen employed in our navigation to the British islands in the West Indies, where the small pox was universally prevalent, which produced an universal concern among the inhabitants, lest the same should become general, and spread through this and the other colonies in New England.²⁸⁸

Operational Dangers Due to Sickness

Disease wrought a medical calamity during the Seven Years' War, which not only threatened operational movements, but often brought the British close to defeat in the conflict. The first Siege of Louisbourg was delayed by a muster of sick men, and the British garrison at Quebec was reduced by four-fifths over a period of five months during the winter of 1759. Though both the Siege of Louisbourg and the battles for Quebec are well known, illness was an almost continuous threat against British military success in North America, inflicting devastation on a dozen lesser-known occasions. During the winter of 1756, the British garrison at Oswego was reduced from seven hundred to fifty, a number that Lind describes as being "...scarce sufficient to protect them from the incursions of the Indians."²⁸⁹ In July of 1756, the Earl of Loudon arrived to take command of the British forces following the death of Edward Braddock in 1755. William Pitt called for an expedition to target Louisbourg, with Loudon to command the land forces, and Admiral Francis Holborne to control the navy and transportation of troops. The siege was ultimately delayed, the official reason being French reinforcements at Louisbourg from Brest and Toulon.²⁹⁰ The cancellation of the siege was very unpopular in London and North America. Letters in the *Gentleman's Magazine* chastised Lord Loudon and Admiral Holborne for

²⁸⁸ Charters, *Imperial State*, 50.

²⁸⁹ Lind, *A Treatise on the Scurvy*, 268.

²⁹⁰ Anderson, *Crucible of War*, 209.

“...not attempting a descent on Cape Breton”²⁹¹, though some conceded that “...our naval force was both too small, and despatched too late in the year.” Both Loudon and Holborne were soon replaced in the fall of 1757 by James Amhercrombie and Edward Boscawen. The numbers were certainly in Britain’s favour; even with the suspected reinforcements from France, the British outnumbered the French two to one, and had four more ships of war.²⁹² In the official documentation in the delay of the siege, there is no mention of disease, but it was almost certainly in epidemic proportions in Halifax at that time.²⁹³ Earlier in that year, letters from Holborne to John Cleveland, secretary of the Admiralty, mentioned hundreds of men that had to be left ashore due to illness. Almost all deaths recorded in both Holborne and Loudon’s forces were after they made landfall in North America. The Halifax town records show that many of the families in the town were infected, and a Dr. Amhercrombie reported that “...it would be very difficult to stop the epidemic.” In July of 1757, Governor Lawrence indicated that a “fever was beginning to spread amongst the troops under his Lordships Command.”²⁹⁴ Records show an increasing number of sick sailors and soldiers attended to by nurses at land hospitals in Halifax.²⁹⁵

Fever laid low entire fighting regiments, particularly those that had recently emerged from docked ships. On August 1st, 1757, John Knox wrote: “The [1st] Royal Regiment with 700 rank and file only have been very sickly,” and that “it appears that since this Army last embarked at their respective ports, if they were then actually complete, have suffered sickness, etc., and perhaps a few deaths.” Later, on September 1st, Knox recorded that a ship has “...landed several sick men... Their disorders are spotted fevers and dysenteries. It is remarkable that seventeen

²⁹¹ *Gentleman’s Magazine*, September 1757.

²⁹² Marble, *Surgeons, Smallpox, Poor*, 55.

²⁹³ *Ibid.*

²⁹⁴ Marble, *Surgeons, Smallpox, Poor*, 54.

²⁹⁵ *Ibid.*

men have died on board the ship in the short passage from Halifax here.”²⁹⁶ Plans continued for a future siege of Louisbourg, to take place in the early spring or summer of 1758. The first new group of British forces to arrive during this time was under the command of Sir Charles Hardy. On March 22 1758, Hardy wrote to the Secretary to the Admiralty, saying that “...The [frigate] *Borias* which arrived here before me brought in a very sickly ships company.”²⁹⁷ When Admiral Boscawen arrived to take over naval command, the number of sick counted for just over ten percent of the entire naval forces. Two of his ships, the *Devonshire* and the *Pembroke* were unusable due to a lack of crew, forcing Boscawen to leave them in port during the eventual summer 1758 siege of Louisbourg. General Jeffrey Amherst arrived into Halifax harbour on May 28 on the *Dublin*. Upon meeting with Admiral Boscawen, he immediately transferred to the Admiral’s ship *Namur*, writing in his journal that “...I had the good fortune to meet Admiral Boscawen with the fleet...The *Dublin* went very sickly into Halifax.”²⁹⁸

Records of disease and illness are particularly descriptive during the 1758 Siege of Louisbourg, with private journals describing typhus and smallpox making their way among the provincials. Upon the illness of an entire colonial company of carpenters servicing the ships and other war materiel, Amherst understatedly wrote that “Colonel Messervy and most of his Carpenters taken ill of the small Pox, which is a very great loss to this Army,”²⁹⁹ and later “...Col Messervy and his Son both died this day, and of his Company of Carpenters of 108 men, all but 16 [are sick with] the small Pox...this is particularly unlucky at this time”³⁰⁰. In early July he wrote that “...as the number of sick of the Provincials encreased and several will not be fit

²⁹⁶ Knox, *An Historical Journal Of The Campaigns in North-America, for the Years 1757, 1758, 1759, and 1860: Containing The Most Remarkable Occurrences of that Period; Particularly The Two Sieges of Quebec.*, Entry of August 1st, Entry of September 1st, 1757.

²⁹⁷ Marble, *Surgeons, Smallpox, Poor*, 58.

²⁹⁸ Jeffrey Amherst, Entry of 14 November, 1759, MG 18, L4.

²⁹⁹ Amherst, “Journal, 1758” entry of June 23, 1758. MG 18, L4.

³⁰⁰ Amherst, “Journal, 1758” entry of June 28, 1758. MG 18, L4.

for any further service this Campaign, I ordered the Surgeons of the Hospital to visit and report them accordingly that the useless may be sent home.”³⁰¹ Typhus and smallpox was also rampant among the French. On September 13 1757, Boscawen writes that “...I have sent all the recover'd French soldiers and sailors from the French Hospitals strictly to France as they have an epidemical disorder amongst them which I am afraid will break out again in their passage to Europe. They have buried many since the surrender of the Town.”³⁰²

Despite the British victory on the Plains of Abraham in the autumn of 1759, by the spring of 1760, the British position in North America was precarious. On April 30 1760, General James Murray reported that French soldiers had just defeated his forces at Quebec City in a battle that was notably bloodier than the British victory months before. Murray blamed the physical weakness of the British force, explaining that his garrison was “...now melted down to three thousand fighting men by the most invertebrate Scurvy”.³⁰³ By the end of September 1759, the British had possession of the town and fort of Quebec, but were surrounded by French forces. The inhabitants of the town were also French, and not particularly friendly to the British garrisoned in the city.³⁰⁴ French civilians were glad to assist French forces and Native Americans, who for the most part were loosely allied with the French and were eager to kill British troops who left the main body and ventured into the forests.³⁰⁵ The British numbered twelve regiments, totalling roughly 7,300 men, with the directive of holding the area, for it was believed that the French would attack in the spring, if not sooner. By November, the British fleet had left the Saint Lawrence to keep free from encroaching ice, effectively isolating Murray until the waters reopened in the spring. The winter was recorded as being unseasonably cold, and soon

³⁰¹ Amherst, “Journal, 1758” entry of July 5, 1758. MG 18, L4.

³⁰² Marble, *Surgeons, Smallpox, Poor*, 61-63.

³⁰³ Charters, “Disease, Wilderness Warfare, and Imperial Relations”, 1.

³⁰⁴ *Ibid*, 11.

³⁰⁵ Charters, *Disease, War, Imperial State*, 29.

the lack of supplies began to have disastrous effects on the stationed soldiers. Captain John Knox writes that "...the weather is now become inconceivably severe, and our soldiers grow numerous in the hospitals; some, who died within these few days, are laid in the snow until the spring, the ground being, at this time, impenetrably bound up with frost."³⁰⁶ By the end of December of 1759, there were just over 4,300 men fit for duty from the original 7,300.³⁰⁷ By February, disease was recorded to have hit the whole body of troops, with Murray mentioning that the garrison was beginning to not be able to perform normal duties because of the number of sick.³⁰⁸ John Knox writes;

The duty of this garrison is now so severe, by reason of our immense numbers of sick and weak men, that the General has been pleased to ease the corps of their regimental guards ; in this case, all prisoners are to be sent to the guards most contiguous to each regiment's district, together with their crimes specified in writing, signed by an Officer ; and must be immediately reported to the Commander of that battalion to which such delinquents may belong.³⁰⁹

In March, Murray planned an attack on nearby French forces, but noted that the health of his troops were not improving, but getting worse. By the end of March, he had only 3,500 able fighting men. Four hundred and sixty soldiers had died during the period, with thousands left in either the hospitals of Quebec, or sent to other towns. In contrast to the Plains of Abraham, where reportedly only fifty-eight British soldiers died, Charters describes the effect as being "demoralizing, even to men used to seeing the gore of a battlefield."³¹⁰ Knox observed that fevers, dysentery and scurvy were the cause of the massive troop decrease, stating that "...the effective strength of our garrison, on the 29th October last, was seven thousand three hundred

³⁰⁶ Knox, *An Historical Journal*. Entry of late 1759. The frosted ground made burials impossible during the winter of 1759. Bodies were taken to a vault and deposited until the spring.

³⁰⁷ Charters, "Wilderness Warfare", 13.

³⁰⁸ Ibid.

³⁰⁹ Knox, *An Historical Journal*, Entry of Early 1760.

³¹⁰ Charters, "Wilderness Warfare", 13.

and thirteen, at this period I am concerned to observe, inclusive, comprehending every degree, we are reduced to four thousand fighting men; fevers, dysenteries, and most obstinate scorbutic disorders have been the cause of this great decrease; and our various hospitals are, at this instant overcrowded with patients.”³¹¹

April brought little relief, the weather still cold, and the French launched harassing attacks against British outposts. One hundred fifty British soldiers died of disease that month, with the garrison was reduced to 2600 men fit for duty. On April 27th, Murray received word that the French were making haste towards Quebec. In his journal, he notes that because of the sick garrison, he did not have enough men to stop the French in a prolonged siege, and instead risked an open battle, where he could rely on his smaller but more experienced force, hoping to repeat the performance of the Plains of Abraham.³¹² The battle, in what is now known as the Battle of Sainte Foy, was a victory for the French. Their forces gained control of the Plains of Abraham, and the British retreated to the town. John Johnson, a clerk to the 58th regiment, described the battle as being between starved, scorbutic skeletons on the British side, and an “...army of healthy, strong, young men.”³¹³ The French abandoned the siege on 16 May, 1760, with the arrival of British reinforcements. By July, Murray wrote to Amherst that out of the garrison of originally 7300, he was leaving for Montreal with 2200, though that number may have been as low as 1600, as reported by the French officer Anne-Joseph-Hippolyte de Maurès de Malartic to the Chevalier de Lévis.³¹⁴

³¹¹ Knox, *An Historical Journal*, Entry of Early 1760.

³¹² Charters, “Wilderness Warfare”, 14.

³¹³ Ibid.

³¹⁴ Charters, *Imperial State*, 32. Charters notes that the governor general of New France, Pierre de Rigaud de Vaudreuil de Cavignial, Marquis de Vaudreuil, observed that British troops in various forts and throughout New England were reduced by sickness and that the “garrison at Quebec cannot hide the depths of its misery,” bolstering his anticipation of French military success.

The correspondence shared between Murray and Amherst was later used by Lind and Pringle to inform their theories of disease. In the early 1750s, the common belief was that many of the fevers were caused by ‘bad air’, according to the miasma theory accepted in many cultures. Lind included an excerpt of Murray’s letters in the third edition of his famous *A Treatise of the Scurvy*, and used the example of the winter of 1759 to refute his previously viewed opinion on putrefaction and corrupted air.³¹⁵ Lind quotes Murray in saying:

You will no doubt be pleased to observe that the enemies attempts on our posts and ours upon their’s, all tended to the honour of his Majesty’s arms, as they were always baffled, and we were constantly lucky. I wish I could say as much within the walls [of Quebec]. The excessive coldness of the climate, and constant living on salt provisions, without any vegetables, introduced the scurvy among the troops, which getting the better of every precaution of the officer, and every remedy of the surgeon, became as universal as it was inveterate.³¹⁶

Though the transmission of birch beer recipes as an anti-scorbutic aid has been well documented in the literature, Lind also notes that provincial soldiers passed on other remedies to scurvy involving pine trees. He writes that the cure consists “...an infusion of the tops of what the French call epinnete blanche or la pruffe. These tops were cut small, and then bruised in a mortar, and to each pound of them was put in a gallon of warm water...and half a pint of it administered morning and evening to each patient...[the surgeon] informed me that this infusion was of great benefit.”³¹⁷

Conclusion

The Death of General Wolfe by Benjamin West depicts a heroic and tragic end for the British General at the Battle of the Plains of Abraham.³¹⁸ The heavens are shown opening above the fallen leader, with Wolfe looking up to the celestial bodies with a look that makes most

³¹⁵ Charters, “Wilderness Warfare”, 16. See also Lind, *A Treatise of the Scurvy*, 269–70.

³¹⁶ Lind, *A Treatise on the Scurvy*, 269.

³¹⁷ Lind, *A Treatise on the Scurvy*, 270.

³¹⁸ Benjamin West, *The Death of General Wolfe* (1771). [Oil on Canvas] Ottawa: National Gallery of Canada.

depictions of saints look unpious. During the battle, only fifty-nine soldiers died, a miraculously small toll for such a large military force as was sent to North America. *The Death of General Wolfe* has been enshrined in Canadian perception of the Seven Years' War and currently hangs in the National Gallery of Canada. What is not depicted is the battle that took place on the same ground eight months later. Called the Battle of Sainte-Foy, the besieged British forces were beaten back by the French, with over 1,100 casualties. Depictions of the battle paint the British as being a far cry from the force of well-trained and well-supplied regulars on which the military prided itself. Upon the first arrival of troops to Halifax in 1755, reports of fever were already present in the Boscawen and Hawke's fleet, with disease spreading into the town and to the peripheral regions of the Maritimes and New England. With every arrival of new ships, the hospital of Halifax filled with sailors and soldiers, the surgeons and physicians themselves becoming sick and falling to 'the pox'. The problem grew to such levels that it threatened operational success, with the first siege of Louisbourg called off nominally because of French reinforcements, but letters from the British commanders describe sickness and disease as a severe worry and constant danger for British success in North America. During the eventual siege of Louisbourg in 1757, writings from Amherst and John Knox depict disease as severely hampering British operations, with entire companies of colonials quickly falling sick and dying. According to contemporary medical theory, disease affected some individuals more than others, and during the Seven Years' Wars, physicians noted that American-born soldiers suffered from more severe illnesses than British counterparts. Relying on the already established link between disease and laziness or a weak constitution, medical officials stationed in North America posited that provincials were sicker because they were naturally less disciplined and energetic than British troops. Inoculation of smallpox was beginning to gain acceptance in the mid eighteenth-

century, but due to processional fears, and unable to cover the cost, North American colonials did not readily inoculate themselves. This made North American towns increasingly wary of quartering British troops, and further highlighted growing tensions between the European British, and the colonials. Though scholars of this period are hesitant to suggest that it directly contributed to the later American Revolution, raising and quartering of troops in North American towns raised questions as to the role of the British military in the American Colonies.³¹⁹ Though the British government during the Seven Years' War was remarkably attentive to colonial concerns during the conflict, local leadership and experiences provided antagonizing and frequently deadly experiences for the colonials.

³¹⁹ Kopperman, "The British Army in North America and the West Indies, 1755–83", 75, and Charters, *Imperial State*, 49.

CONCLUSION

In the latter years of the eighteenth century, physician Frederick Thomson published *An Essay on the Scurvy*. The name is slightly a misnomer compared to previous writings on scurvy by Lind or Blane, as by 1790, scurvy was virtually eliminated by the introduction of lemon juice, making Thomson's monograph more accurately a reflection of his time serving as a surgeon in the Royal Navy during the 1760s and 1770s. He was hesitant to write at length on fevers, saying that it has been covered "...so fully and so well" by Lind and Blane, that it "seems to render what I intended to say, totally unnecessary." Even with that warning, he stresses "...[the] necessity of careful attention to that part of the service which relates to the draughting of men from guardships and tender." And that "...I might produce many instances of dreadful ravages on board of ships, occasioned by the Ship Fever, (otherwise called the gaol, or Hospital Fever) whose origin could easily be traced to the recruits, or other draughts of men, received at the ports where the ship's company had been completed."³²⁰

Thomson describes his time aboard the *Tartar*, sailing out of Deptford in 1770. He describes the initial crew of two hundred as being "...good seamen", many of whom signed up voluntarily, to the point where the ship's officers had the opportunity to "select the best", and that they were "well satisfied with the ship's company."³²¹ A month later at Nore, they received two hundred additional crew members, this time impressed men who came from a guardship. Among other unkind words, Thomson describes them as being sick with fever. He said that they "...appeared to be the refuse of mankind; poor, miserable wretches ; with squalid, unhealthy, countenances ; and other appearances, which bespoke their late release from jails, or other places of confinement ; which, in fact, was the case of many of them." The *Tartar* was a small ship, and

³²⁰ Thomson, *An Essay on the Scurvy*, 316.

³²¹ Ibid.

four-hundred men more than doubled its standard compliment. Thomson describes how in the cold winter weather, hatches were kept shut, men huddled together for warmth, and no laundry could or would be done. Weeks out of port, Thomson describes a number of illnesses befalling the crew, including “...pleuritic and rheumatic complaints; several became highly scorbutic; others, had bad chilblains; and a few were frost bitten, whose toes were in a gangrenous state,” but the most common and deadly was those afflicted with “ship’s fever”.³²² Seventy-one died before they touched shore at Spithead, and nearly the entire crew was sent ashore to be transported to Haslar. The ship was thoroughly coated with quicklime and vinegar, washed, stripped, and fumigated, and the men were scrubbed clean and had their hair cut short. In spite of all these precautions, typhus continued until the weather turned warm, and the men working on the ship began to wear less of the louse-ridden clothes, and would sleep atop the deck, as opposed to below in the dirty bedding.

Thomson’s experience aboard the *Tartar* is exemplary of the circumstances found in the Royal Navy during the Seven Years’ War. The manning of the navy was a serious and persistent concern that confronted the British government and naval administration. Because of the need of the British to utilize their navy, sailors had significant value to the state, any assumption that they were viewed as disposable is incorrect. Persistent medical circumstances forced the Admiralty to take disease aboard ships seriously, using significant money and personnel to seek solutions from the emerging medical profession. Due to the circumstances of war, and the relatively ad hoc nature of British medical structures, reform was not immediately implemented aboard the Royal Navy, but physicians in the late eighteenth century identified the work of surgeons such as James

³²² Ibid, 320.

Lind during the Seven Years' War as being important to the development of shipboard health and hygiene.

Sailors were valuable members of the Royal Navy and seen that way not only by shipboard officers and commanders, but also by those who inhabited the halls of power in the Admiralty Board in London. In 1755, for example, as a result of demobilization from previous conflicts, there were not enough sailors to crew all of the Royal Navy ships that were currently afloat, and certainly not enough to man the ships currently under construction. The circumstances of the Seven Years' War forced the Admiralty to impress diseased men to fill the ships. Logistical planning ordered that ships be overfilled with sailors, even if that overfilling meant that disease was more likely to be spread. It was believed that it would be better to have a ship have a great number of sick crew and still sail, as opposed understaffed healthy crews, forcing the ship to remain in port.

There was value placed upon a healthy sailor, but that value was an extension towards the greater importance in keeping the Royal Navy's ships afloat. The ships that were in service were small and overfilled, causing the first expedition of sailors sent to North America to easily fall victim to 'ship's fever', or typhus. There is, amongst historians, no clear consensus on what was the cause of the infection on Admiral Boscawen's first voyage; the crews were typically professional sailors, and likely would not have been infected by prisons or guardships. It is possible that they were infected by French prisoners they took aboard from French ships sailing out of Louisbourg, as there were reports of typhus and smallpox from the fortress during this period. Forced to return home with limited manpower, the British government began to fill the berths of the ships with impressed Britons.

It remains difficult to discern exactly how prevalent impressment was during this period, as muster books are notoriously uneven in quality, particularly as an historical source.³²³ According to Naval historians such as N.A.M Rodger, Daniel Baugh and Stephen Gradish, the number of impressed on ships may have varied between fifteen to fifty percent.³²⁴ It is known that the number of recruits began to dwindle by late 1755. Within the first six months of mobilization, the number of recruits added to the muster lists fell by three-quarters, which was not enough to make up for losses sustained from disease, desertion, and projected casualties. The impress service was given orders to pick healthy men of seafaring experience, though this rarely happened in practice. From 1740, it implicated that anyone between the ages of 18-55 who “used the sea”, a notoriously ambiguous term, could be impressed upon by the Admiralty. Picking up the wandering poor was an old practice, with precedents in the Tudor and Stuart eras, but was given explicit statutory endorsement in the eighteenth century. Laws against vagrancy exposed the poor to “jail fever” or typhus, which would then be transferred by those ‘impressed’ paupers and petty criminals onto the Royal Navy ships, bound for North America.

Once seized for naval duty, the impressed men could be confined in guardships, which were noted as being infested by typhus and other diseases. Records and journals suggest that impressed men either came from, or were housed in British prisons. During this period, prisons were infamously unhygienic, with one of the many names for typhus being ‘jail fever’. Both the various assizes and private inspections depict environments that are cramped and unsanitary, perfect grounds for the spread of the louse-borne disease. As well as typhus, smallpox was a constant concern for all Britons during this time. Though there was a population density sufficient enough to support a naturalized immunity in London and other large cities, records

³²³ Hubley, 191.

³²⁴ N.A.M. Rodgers, *Wooden World*, 178, Baugh, *British Naval Administration*, 159, Gradish, *Manning*, 69.

indicate that a significant portion of sailors impressed into the Royal Navy were still susceptible to smallpox infection and transmission.

The ships themselves offered little in relief to liveable conditions, as they continued with characteristics of both prisons and guardships. They were cramped, overstuffed self-contained worlds. The louse that transfers typhus was easily shared between sailors huddling for warmth in the cold of the North Atlantic, and rough seas and North America's harsh winter climate would dissuade sailors from frequently doing laundry. The sleeping berths were too small, with dirty bedding and clothes, and the only ventilation would come from the cannon ports, which were only opened in warm, good weather. James Lind and Gilbert Blane, among others, theorized that hygiene was the reason for "ship's fever", and their recommendations would eventually lead to greater cleanliness of ships and sailors. As well as typhus, sailors would need to contend with scurvy and dysentery, both caused by poor diet. Though scurvy may have been over reported at the time due to the symptomatic similarities with mercury poisoning, caused by the application of mercury-based calomel as a common purging agent, it was still a serious concern for both the sailors on ships, and later soldiers in garrisons, where no fresh victuals could be obtained. 'The Flux', or diarrhoeal diseases, were common, and would cause the infection of water in the bilges and also the orlop deck, where provisions and supplies were stored. The Admiralty took these issues of health seriously, and in the years following the Seven Years' War, there were reforms to shipboard practices suggested by Navy physicians and surgeons, with documents from Haslar hospital showing the near eradication of scurvy and typhus aboard ships by the end of the eighteenth century.

Once ships reached North America, often through the military port of Halifax, they would spread their infection throughout the surrounding area, causing friction between colonial

governors and the Admiralty. Though not officially reported as a leading cause for operational delays, private letters and journals from military commanders in North America describe disease as being a serious problem; the original siege of Louisbourg was delayed, nominally due to French reinforcements, but also likely because of the sickness that had spread throughout the British forces. During the 1757 siege, entire regiments of colonial forces fell sick from fever and smallpox, threatening British success. This spread of disease amongst the colonials would highlight growing concerns of the body, furthering the belief that the European body was different than that of the colonial. Inoculation of smallpox was distrusted during this period due to both prohibitive cost, and dangerous methods. Disaster would later strike British military efforts in the 1759-1760 winter at Quebec, where the original garrison would be reduced by nearly eighty percent over a period of five months due to fever and scurvy. This would contribute to a bloody defeat on the same battleground where, in the previous autumn, the British won against the French at the battle of the Plains of Abraham. Were it not for reinforcements the following spring, British control over the town and fort of Quebec would be uncertain.

Tracing the importance of disease in military campaigns is only a recent phenomenon. Traditional English historiographies have frequently downplayed or ignored the role of sickness and disease in eighteenth century warfare, with only publications emerging from authors such as Erica Charters, Paul Kopperman and Geoffrey Hudson highlighting the importance of military medicine in the development of the British Empire.³²⁵ The connection between the mobilization of the Royal Navy, the sickness of impressed sailors and the eventual spread of disease is a topic that had yet to be engaged and contextualized. British success in the Seven Years' War was by no means guaranteed, and was constantly threatened by a lack of manpower to crew ships. The

³²⁵ Charters, *Disease, War, Imperial State*; Kopperman, "The British Army in North America and the West Indies, 1755-83,"; Hudson, *British Military and Naval Medicine, 1600-1830*.

use of impressment to fill manning gaps exacerbated the problem, as healthy crews would be mixed with diseased, the infected ships sailing to North America, and spreading ailments such as typhus and smallpox to the local population.

A matter only briefly touched upon in this dissertation is local responses by both governors and colonial populations. The differentiation of European bodies and colonial bodies highlights a growing rift between the British government and their overseas colonies, and the alienation felt by towns and ports forced to quarter sick troops and recommendations for distrusted inoculations. Further study on the depths of this distrust is warranted. Scholars of imperial and colonial medicine such as Charters stop just short of suggesting direct correlation between the social and imperial tensions due to sickness of colonials to the American War of Independence. Because the famous eruption of smallpox in Washington's armies being instrumental to revolutionary defeat in Canada,³²⁶ including deliberate spreading of smallpox among vulnerable colonial populations, a detailed examination of colonial reaction to smallpox from 1763-1776 would advance our understanding of disease and medicine in colonial settings. Though humoral theory formed a foundation of medical knowledge during the eighteenth century, little is known about how it was applied to the North American colonials. Contemporary literature focuses on the experiences and structures applied to indigenous peoples, and black slaves.³²⁷ An examination into how humoral theory was applied to European colonials would advance the scholarship on the contentious relationship between colonials and their European counterparts. Nevertheless, despite the need for further scholarship and research in this field, historians and contemporaries alike realize all too well that life aboard ships was fraught with

³²⁶ See Charters, *Disease, War, Imperial State*, 50, and Becker, "Smallpox in Washington's Army", 382.

³²⁷ Roxann Wheeler, *The Complexion of Race: Categories of Difference in Eighteenth Century British Culture* (Philadelphia: University of Pennsylvania Press, 2000), Catherine Gallagher, "The Body Versus the Social Body in the Works of Thomas Malthus and Henry Mayhew." *Representations*, no. 14 (1986): 83-106.

death, famine, disease, and the dangers of war. The Admiralty who laboured to keep the ships staffed and provisioned were well aware that the four horsemen of the apocalypse also plied their trade upon the seas.³²⁸

³²⁸ For more on apocalypticism in the eighteenth century in the Anglo-American world, see Sarah Hutton's "The seven trumpets and the seven vials: Apocalypticism and Christology in Newton's theological writings." In *Newton and Religion* (Springer: Kluwer Academic Publishers, 1999), 165-178 and *Anglo-American Millennialism: from Milton to the Millerites*, Richard Connors and Andrew Colin Gow, eds. (Boston: Leiden, 2004).N

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