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Medicine Is War: The Martial Metaphor in Victorian Literature and Culture

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

English

by

Lorenzo Servitje

June 2017

Dissertation Committee:

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The Dissertation of Lorenzo Servitje is approved:

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Dedication

This dissertation is dedicated to my wife, Mary Servitje, whose unwavering support and interest over the past several years made this work possible. Her inspiration, encouragement, and medical expertise helped shape this project through its various stages. I would also like to dedicate this to my daughter, Lorian Servitje, whose tenacity, spirit, and love of learning continues to inspire my scholarship. My stepson, David Marquez, like his mother, has been an invaluable copyeditor and audience for this work for whom I am very grateful. Finally, I would also like to thank my parents, Lorenzo and Mariana Servitje for their support throughout my education.

ABSTRACT OF THE DISSERTATION

Medicine Is War: The Martial Metaphor in Victorian Literature and Culture

By

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University of California, Riverside, June 2017
Dr. Susan Zieger, Chairperson

Medicine is most often understood through the metaphor of war, as in “the fight against Ebola.” What I call the “martial metaphor” is so embedded in the discourses of medicine—and the disciplines that critique it—that we do not think twice about using this construction or about its bioethical implications, much less its origins. As the first cultural history of the martial metaphor, “Medicine Is War: The Martial Metaphor in Victorian Literature and Culture” shows how it gained cultural purchase throughout the nineteenth century to become the figure of speech so prevalent today. The thought of medicine as war didn’t begin as a metaphor; it emerged from the material connections between the military and medicine. These material connections were reflected on and redeployed as a metaphor by such authors as Mary Shelley, Arthur Conan Doyle, Charles Kingsley, Bram Stoker, and Joseph Conrad during the advent of medical modernity to become codified in everyday usage.

Part I discusses how Shelley and Kingsley conflated the cholera epidemics of the first half of the nineteenth century with war in the context of pre-bacteriological theories of disease.

Part II addresses the connections between empire, race, and germ theory in the second half of the nineteenth century as articulated through the writings of Stoker, Conan Doyle, and Conrad, where we see that the epistemological change to understanding disease as caused by living organisms challenged Britain's salubrious racial identity.

"Medicine Is War" accounts for the historical baggage in the language commonly used to articulate the encounter with disease. Scholars such as Pamela Gilbert and Laura Otis who have referenced the metaphor in the context of other investigations of how nineteenth literature dealt with biological anxieties mapped onto political ones and vice versa have not addressed the cultural work of the metaphor itself. By contrast, "Medicine is War" traces how the metaphor's history influenced its use in the Victorian era, revealing how literature occluded the military history of medical language and circulated the resulting metaphor in the public imaginary.

Table of Contents

Introduction.....	1
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Part I

1. Denaturing the Martial Metaphor in Mary Shelley's <i>The Last Man</i>	46
2. "Never Say Die": Charles Kingsley Meets Cholera Face to Face.....	105

Part II

3. Military Pasts and Medical Futures in Bram Stoker's <i>Dracula</i>	157
4. Arthur Conan Doyle's Imperial Armamentarium.....	209
5. Joseph Conrad on Triumphant Heath, Tropical Medicine, and Magic Bullets.....	275
Conclusion.....	326
Bibliography.....	333

Introduction

“When Sabeti learned that Ebola had reached Sierra Leone, she called a meeting in what she and her colleagues had begun to refer to as the Ebola War Room.”

Richard Preston (2014)

“We must be prepared, first, to detect the infectious material easily and with certainty, and second, destroy it.”

Robert Koch (1903)

“One could meet cholera face to face, as one does with those Russians.”

Charles Kingsley (1857)

A clear thread ties these phrases together: the common understanding of medicine through the conceptual domain of war. This connection might seem to go without saying: isn't it only natural to talk about medicine as war? Both because that's what medical technology does—kills pathogens and “fights” disease—and because that's how the immune system works—as a “defense”? Each of these authors follows this familiar pattern in framing infectious disease at a specific historical moment. The first quotation, from a *New Yorker* article by Richard Preston, author of *The Hot Zone* (1994), refers to a computational biologist who led the sequencing of the Ebola virus of the 2014 pandemic. In the second, from “Crusade against Typhoid Fever,” the famed bacteriologist and “father” of modern germ theory Robert Koch discusses his attempt to develop a treatment

for the tuberculosis bacillus that he discovered a decade earlier. The third, from *Two Years Ago*, a popular Victorian social-problem novel by Charles Kingsley, addresses a military officer's attempts to help a local aristocrat take measures against a deadly cholera outbreak in a small Cornish town by comparing the disease to Britain's enemy during the Crimean War.¹

In fact, it is not "natural." It is the product of a set of historical relations between actors, ideologies, and cultural production. As this study reveals, the connections between the "wars" of public health, the personal "battles" against disease, and disease as a "threat" to national security are related not simply by using the same rhetorical shorthand of the martial metaphor, but by being iterations of scale in the way medicine operates as politics by other means. I could choose from innumerable examples to illustrate the pervasiveness of this figure of speech, but what I want to draw attention to by reading these instances of the metaphor together is the fact that we can trace it back to the nineteenth century and connect it to the Victorian novel.

Instead of focusing on the accuracy of talking of medicine in terms of war, or arguing for more accurate representation of the relationships between humans, microbes, and medical technologies, I want to consider how this metaphor was naturalized and how this process was related to larger social, political, and cultural contexts.

This project's concern is the way those encounters with disease, and their politics and rhetorical constructions, made their way into the dominant language through which

¹ Robert Koch, "The Crusade against Typhoid Fever," *British Medical Journal* I (1903). Translated in *BMJ* from an address given at the Kieser Wilhelms Institute on November 28, 1902.

civilian medicine and the general public understood infectious disease.² One pressing line of inquiry pursues the metaphor's knowledge effects and the kinds of regimes of truth it co-produced. I suggest that the metaphor didn't appear suddenly and become popular as a figure of speech, but rather that it gained cultural purchase as it developed from the institutions, bureaucracies, and the material conditions of military medicine. Military medicine encompasses a number of specialties, including combat traumatology, but here I refer to its primary directive of supporting combat operations and military deployments in terms of hygiene, epidemiology, and preventive medicine. Causality and mortality rates before World War II, were due mostly to infectious disease. This started changing with the development of the mechanistic and chemical weapons of World War I, and the development of antibiotics, most notably penicillin. Thus while military medicine includes both hygiene and therapeutics, even in the nineteenth and twentieth centuries most monographs on the subject, such as Edmund Park's *Practical Hygiene* (1864), begin with chapters on the conditions that foster or prevent disease. Moreover, these introductions tend to speak of the primacy of prevention and treatment of disease, rather

² While the term is generally used to mean a microbial pathogen that can produce a pathological response in the body, in the early nineteenth century, this specifically referred to disease transmission via air as *infectious*. Christopher Hamlin, *Cholera: The Biography* (Oxford: Oxford University Press, 2009), 74.

than wound care, even though military medical practitioners were mainly surgeons.³ Military surgeons writing about infectious disease during wartime tended to discuss medicine and war in a metonymic capacity: soldiers were dying of disease, and combat operations were affected by this, so disease was framed as an enemy. These writings, however, had a limited audience and fairly fixed rhetorical purpose. Literature, however, allowed for a broader reach and for orders of complexity, through which to permutate the martial metaphor through.

To that end this dissertation, “Medicine Is War: The Martial Medical Metaphor in Victorian Literature and Culture,” examines how nineteenth-century authors considered the British military’s encounter with disease as they reflected on the developing politics of public health. I explore the participation of literature in the circulation of the martial metaphor as it gained traction as a tool of governance through the linking of medical discourse with national defense. The metaphor didn’t simply emerge from figurative language; rather, it had a material grounding in the institutions and bureaucracies of the

³ Mark Harrison notes that Park’s text was the standard for military medical men, at home and in the colonies, between the 1860s-1880s. *Public Health and British India: Anglo-Indian Preventive Medicine, 1859-1914* (Cambridge: Cambridge University Press, 1994), 52. See also in Pamela K. Gilbert, *The Citizen’s Body: Desire, Health, and the Social in Victorian England* (Columbus: Ohio State University Press, 2007), 54. Other examples of military medical manuals following this pattern include John Martin, *Contributions to Military and State Medicine: First Volume* (London: J. & A. Churchill, New Burlington Street, 1881), 1-3; James Irving, *A Concise View of the Progress of Military Medical Literature in This Country* (Edinburgh: Stark and Company, 1846); Robert Jackson, *Remarks on the Constitution of the Medical Department of the British Army: With a Detail of Hospital Management, and an Appendix, Attempting to Explain the Action of Causes in Producing Fever and the Operation of Remedies in Effecting Cure* (London: T. Caldwell, W. Davies, and Strand, 1803). An exception would be Charles Alexander’s *Experiences of an Army Surgeon*, where he begins with wounds, but like all previously cited works, he acknowledges the primacy of infectious disease. Charles Alexander Gordon, *Experiences of an Army Surgeon in India* (London: Ballier, Tindall, and Cox, 1872).

British military in the nineteenth century. In this way, military medical practice preceded the subversion of the martial vocabulary into the martial metaphor, which was then popularized in the fiction of authors such as Mary Shelley, Charles Kingsley, Bram Stoker, Arthur Conan Doyle, and Joseph Conrad. Authors reflected on material cases of military medicine—such as the cholera epidemic during the Crimean War (1853–1856) and the poor health of British army recruits during the Boer War (1899–1902)—and deployed them in the figurative construction of medicine as war. In this way, literature occluded the material connections between the military, medical science, and public health by means of a metaphorical substitute.

Metaphors are useful for understanding disease processes and treatments, along with the institutional efforts to prevent and treat them. This is especially true of infectious disease. The complexity of physiological processes and of institutional structures of public health are easily conveyed and understood in metaphoric terms. Virginia Woolf notes in “On Being Ill” that for the individual sufferer, “to hinder the description of illness in literature, there is the poverty of the language. English, which can express the thoughts of Hamlet and the tragedy of Lear, has no words for the shiver and the headache.”⁴ She suggests that even literature cannot accurately represent suffering due to disease. What I am interested in, however, is the way the forms and devices of literature go beyond just individual suffering. Metaphor provides a clear benefit here: communicating the hard-to-describe affective and physiological dimensions of illness using another conceptual frame in which life is also very much at stake.

⁴ *The Moment, and Other Essays* (San Diego: Harcourt, Brace, 1948), 11.

Of course, metaphORIZING disease is not without its own problems, as Susan Sontag has suggested. But unlike *Illness as Metaphor*, “Medicine is War” focuses less on the individual experience of illness than on the broader cultural work performed by the specific metaphor of war, as the martial metaphor is the dominant way of describing infectious and terminal disease in a number of different registers. This ubiquity has led to its naturalization and, furthermore, its invisibility. The martial metaphor’s emergence and continued use have materially problematic effects, such as the fostering of health for some at the expense of others and the phenomenon of antibiotic resistance resulting from the “total war” against bacteria. By attending to the history of the martial metaphor, we can denaturalize the inimical relationship between humans and infectious disease; it discloses the conditions that have shaped the politics of medicine in the present moment.

The Metaphor We Cure By

It is important to clarify the way the martial metaphor structures our thinking about medicine. One example of the metaphor’s ubiquity, not just in medicine but in scholarship about medicine. Medical historians, like Roy Porter use it abundantly. Its presence in this kind of work shapes not only the way we think about disease now and the way medical discourse talked about disease in the nineteenth century, but even the way we think about medical history.

This is not to condemn the use of metaphor by historians and interdisciplinary scholars. As the narrator of George Eliot’s *the Mill on the Floss* reminds us, it is lamentable “that intelligence so rarely shows itself in speech without metaphor,—that we

can so seldom declare what a thing is, except by saying it is something else.”⁵ Writing about the metaphor without resorting to metaphor is often a struggle in itself. Therefore, rather than challenging other scholars’ use of it, I suggest that we must understand the implications, history, and politics that underlie the martial metaphor so that we can reflect critically not only on its history but on its role in medical historiography, bioethics, and practice.

I follow the medical ethicists and medical humanists who have suggested that “medicine is war” is a *conceptual metaphor*,⁶ what George Lakoff and Mark Johnson define as the fundamental understanding of one idea in the conceptual domain of another.⁷ That is, it is difficult to think about medicine and disease in non-militarized terms. The metaphor is conceptual because we don’t even think of it as it metaphor: medicine *fights* disease; the immune system *defends* against microbial invaders. The martial metaphor’s construction registers immediately, without our having to process how medicine *is* or even *is like* war. This is different from, for instance, thinking of medicine as a balance, which I will discuss in the case of pre-nineteenth century humoral

⁵ *Mill on the Floss* (Norton: New York, 1860; repr., 1993), 117.

⁶ Giovanni De Grandis, “On the Analogy between Infectious Diseases and War: How to Use It and Not to Use It,” *Public Health Ethics* 4, no. 1 (2011); April D. Marshall, “Metaphors We Die By,” *Semiotica: Journal of the International Association for Semiotic Studies/Revue de l’Association Internationale de Sémiotique* 161, no. 1-4 (2006); V.L. Warren, “The ‘Medicine Is War’ Metaphor,” *HEC Forum* 3, no. 1 (1991).

⁷ George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 2003), 1, 5.

medicine; or as a dance,⁸ conceptualizing the body and medicine as responding to disease in a kind of fluid rhythm, as some Eastern traditions do; Or as symbiosis—a mutually beneficial relationship between two organisms— rather than antibiosis—an antagonist relationship between two organisms— as current research into the microbiome is suggesting we do.⁹ Metaphor, in this way, determines what we imagine as possible treatment. War, in this case, has shaped how we have overused antibiotics for the last half century. There is a need, especially in the case of bacterial pathogens, to rethink this metaphor. The National Academy of Science’s Forum on Microbial Threats (2005) summarizes the need to change paradigms. In “Ending the War Metaphor: The Changing Agenda for Unraveling the Host-Microbe Relationship,” the editors urge that “the metaphor of ‘war’ on infectious disease—characterized by the systematic search for microbial ‘cause’ of each disease, followed by the development of antimicrobial therapies—can no longer guide biomedical science or clinical medicine.”¹⁰

⁸ Paul Hodgkin, “Medicine Is War: And Other Medical Metaphors,” *BMJ* 291, no. 6511 (1985): 1821.

⁹ M. P. Francino, “Antibiotics and the Human Gut Microbiome: Dysbioses and Accumulation of Resistances,” *Frontiers in Microbiology* 6(2015); Benjamin P. Willing, Shannon L. Russell, and B. Brett Finlay, “Shifting the Balance: Antibiotic Effects on Host–Microbiota Mutualism,” *National Review of Microbiology* 9, no. 4 (2011); E. A. Elie-Fadrosh and D. A. Rasko, “The Human Microbiome: From Symbiosis to Pathogenesis,” *Annual Review of Medicine* 64(2013). For humanistic treatments in this vein see Robert Geroux, “Intestine Disorder: Neoliberalism and Biomial Politics,” in *Endemic: Essays in Contagion Theory* (Palgrave); Alfred I. Tauber, *Immunity: The Evolution of an Idea* (Oxford: Oxford University Press, 2017).

¹⁰ “Ending the War Metaphor: The Changing Agenda for Unraveling the Host-Microbe Relationship: Workshop Summary” (Washington, DC, 2005), 2.

The case of antimicrobial resistance, among other examples, shows that war's structuring of our conception of medicine goes beyond the realm of cognitive linguistics; it has material effects. The power of the metaphor over conceptual understandings and material practices lies in the fact that the vehicle, in this case *war*, amplifies some aspects of the tenor (or ground), *medicine*, while deemphasizing others.¹¹ In other words, the metaphor makes it easier to know and experience some aspects and avoid others. Of course the notion that language shapes our reality is by now a foregone conclusion. However, the malfunction and subsequent repair of the human frame have far-reaching effects in many dimensions of human life. As historian of medicine Charles Rosenberg suggests, "Disease is at once a biological event, a generation-specific repertoire of verbal constructs reflecting medicine's intellectual and institutional history, an aspect of and potential legitimation for public policy, a potentially defining element of social role, a sanction for cultural norms, and a structuring element in doctor/patient interactions."¹² It is with Rosenberg's definition in mind that I understand medicine in somewhat broad terms as not only the pharmacological or surgical intervention in the body, but as the shaping of the material conditions of existence that forestall death, including modifications to hygiene, architecture, infrastructure, and public health. It is precisely in

¹¹ Abdulsalam Al-Zahrani, "Darwin's Metaphors Revisited: Conceptual Metaphors, Conceptual Blends, and Idealized Cognitive Models in the Theory of Evolution," *Metaphor & Symbol* 23, no. 1 (2008): 52. Gillian Beer speaks to some of the problems and benefits to analogy (and more specifically metaphor) in *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 3rd ed. (Cambridge; New York: Cambridge University Press, 2009).

¹² "Disease in History: Frames and Framers," *The Milbank Quarterly* 67 Supplement 1(1989): 1.

these varied registers that Rosenberg suggests disease operates in that the martial metaphor shapes life and its conditions. Considering disease in this capacity helps us see how we have come to think of and practice medicine.

The line of inquiry in “Medicine is War” follows Nikolas Rose’s imperative for genealogies of medicine, that they must unravel the medical certainties that are bound to the present: “the valorization of health and the sanitization of suffering, the powers ascribed to medical personages in relation to the disquiets of the body, soul, and social order, the sense of ourselves as perfectible through the application of medical techniques.”¹³ Therein lies the groundwork for the politics of medicine. Given war’s ability to incite populist and nationalist sentiment and to foster and develop related cultural anxieties, it makes sense that appeal to metaphorical war is an effective rhetorical move in political registers such as the war on drugs or the war on cancer: it creates a zero-sum narrative. Here lies the paradox, related to Priscilla Wald’s argument about the population-shaping work of the outbreak narrative: it at once brings people together and pushes them apart.¹⁴ Similarly, the martial metaphor brings some together and pushes others apart.

While I am not the first to note the existence of “medicine is war,” this is the first cultural history of its development. Though a number of articles in multiple disciplines

¹³ “Medicine, History and the Present,” in *Reassessing Foucault: Power, Medicine, and the Body*, ed. Colin Jones and Roy Porter (London: Routledge, 1998), 50.

¹⁴ *Contagious: Cultures, Carriers, and the Outbreak Narrative* (Durham: Duke University Press, 2008), 58

have addressed the topic, there is no single extended study of the metaphor's emergence and its effects on medicine and politics. Scholars in bioethics and the medical humanities have addressed the existence and the effects of the metaphor in terms of doctor-patient relationships, healthcare decisions, and, recently, the ecological dynamics of the host-microbe relationship.¹⁵ In work related to this project and its more contemporary inflections, Ann Mongoven, for instance, has connected the metaphor's use to contemporary politics and the war on terror,¹⁶ a productive approach that looks beyond strictly medical or bioethical discourse. And Susan Sontag, in one of her best-known works, speaks to the problematics of militarizing medicine, citing specifically the problems with metaphor and the shifts in how a specific disease like tuberculosis is thought of and talked about in contrast to cancer. Sontag was one of the first scholars to address the metaphorical militarization of medicine. She, and others following her,¹⁷ suggests that it is a controlling metaphor for talking about disease and traces its

¹⁵ De Grandis, "On the Analogy between Infectious Diseases and War: How to Use It and Not to Use It; Carmelo Aquilina and Julian C. Hughes, "The Return of the Living Dead: Agency Lost and Found?," in *Dementia: Mind, Meaning, and the Person*, ed. Julian C. Hughes, Stephen J. Louw, and Steven R. Sabat (Oxford University Press, 2006); Marshall, "Metaphors We Die By; Warren, "The 'Medicine Is War' Metaphor." "Ending the War Metaphor: The Changing Agenda for Unraveling the Host-Microbe Relationship: Workshop Summary."

¹⁶ Ann Mongoven, "The War on Disease and the War on Terror: A Dangerous Metaphorical Nexus?," *Cambridge Quarterly of Healthcare Ethics* 15, no. 04 (2006).

¹⁷ This earliest recognition of this metaphor and its relation to medical epistemology I have found is Ludwig Fleck's 1935 *Genesis and Development of Scientific Fact*, first translated into English in 1975. See Ludwik Fleck et al., *Genesis and Development of a Scientific Fact* (Chicago [u.a]: Univ. of Chicago Press, 2008).

development to the 1880s and the rise of bacteriology,¹⁸ a contention I challenge by relating the metaphor's development to the history of medical science. I suggest that pre-germ disease theories developed the martial metaphor even before disease was personified, agentified in the form of the microbe.

Scholars of nineteenth-century studies working at the intersection of literature and medical history have addressed the existence of the metaphor. Most notably, Pamela Gilbert describes the mobilization of the country in response to cholera as a significant process in nation-building,¹⁹ and Laura Otis, who has considered how the development of cell-theory and the subsequent metaphors of invasion participated in the imperial projects of England and Germany.²⁰ More recently, Tina Young Choi has explored the co-production of medico-scientific writing and literature with respect to corporeal social relations, speaking to the site of “conflict” wrought by germ theory.²¹ Outside of work that draws on fiction as a primary source, Ed Cohen argues that the notion of bodily self-defense vis-à-vis biological immunity has precursors in Enlightenment political

¹⁸ Susan Sontag, *Illness as Metaphor* (New York: Vintage Books, 1979), 64-66. Tauber, *Immunity*, 1.

¹⁹ Pamela K. Gilbert, *Cholera and Nation: Doctoring the Social Body in Victorian England* (Albany: State University of New York Press, 2008). See also *The Citizen's Body; Mapping the Victorian Social Body* (Albany, NY: State Univ. of New York Press, 2004). Others scholars in Victorian studies have mentioned the metaphor in passing, such as Kristine Swenson, *Medical Women and Victorian Fiction* (Norman: University of Missouri, 2007); Mary Wilson Carpenter, *Health, Medicine, and Society in Victorian England* (Santa Barbara: Praeger, 2010).

²⁰ *Membranes: Metaphors of Invasion in Nineteenth-Century Literature, Science, and Politics* (Baltimore: Johns Hopkins University Press, 1999), 3-5.

²¹ *Anonymous Connections: The Body and Narratives of the Social in Victorian Britain* (Ann Arbor: University of Michigan Press, 2015), 134.

philosophy that can be traced through the development of biopolitical governance.²²

While Cohen's work is particularly helpful for tracing the political work of the immune system as a discourse, the metaphor of war was inflected differently by different eras and their dominant disease theories, with biological immunity appearing only toward the end of the nineteenth century. Moreover, existing scholarship has not considered the roles played by literature and military history in the formulation of the metaphor. It is crucial that we address the material influence of military imperatives, logics, and technologies in the language that structures how we think about medicine, its politics, and its various actors. It is crucial that we understand the martial metaphor's history in order to recognize the impact that our choice of medical language makes.

Disease Agents and Medical History

While the metaphor does predate the early nineteenth century, I suggest that it does not fully emerge into medical discourse and the popular imaginary until then. Its use, mostly in terms of how disease is made into an enemy, can be traced back as early as 1623,²³ when in *Devotions upon Emergent Expressions* John Donne described his illness as a "siege."²⁴ The seventeenth-century English physician Thomas Sydenham proclaimed that

²² *A Body Worth Defending: Immunity, Biopolitics, and the Apotheosis of the Modern Body*. Durham: Duke University Press, 2009.

²³ I am indebted to Heather Patricia Lane, SueAnne McLachlan, and Jennifer Philip for pointing out these earlier instances. See "The War against Dementia: Are We Battle Weary Yet?," *Age and Ageing* (2013).

²⁴ *Devotions Upon Emergent Expressions* (Toronto: University of Michigan, 1959), 124.

“[a] murderous array of disease has to be fought against, and the battle is not a battle for the sluggard.”²⁵ Though the metaphor appears in Donne and Sydenham, disease does not fit as in an inimical into the reigning system of medical thought of their time as congruently as it would after the nineteenth century. Earlier forms like these appear before 1800, more than I have listed here, but there are a number of reasons that these early figurations did not gain the same kind of traction or cultural purchase, nor link up with contemporaneous biopolitical paradigms in the way nineteenth-century instances did, such as the increased circulation of published material, both medical and literary, and the rise of biopolitical governance. I will discuss these at length in the following section, but here I want to speak to changes in the way life and disease were conceptualized, particularly the way disease was made into an object of knowledge in the body, and at the same time into an external agent that invaded the body.

The shift in medical epistemes that occurred during the transition from the late-eighteenth to the early-nineteenth century facilitated conceptualizing disease as an entity while at the same time recognizing it as a process. The reification of infectious disease specifically allowed the possibility of fighting against it to become a more logical proposition than the previously dominant humoral medicine did.²⁶ Before the emergence of the medical gaze, disease was not localized in the manner of lesions in tissue. Before

²⁵ *The Works of Thomas Sydenham, M.D.* (London: Printed for the Sydenham Society, 1848), 267.

²⁶ This struggle between humoral and scientific medicine was not clean epistemic break, rather the shift occurred as a gradient. See David Greeves, *The Healing Tradition: Reviving the Soul of Western Medicine* (Oxon: Radcliffe, 2005), 137.

disease could be “seen” through the “opening up” of nineteenth-century French anatomist Xavier Bichat’s corpses—his pathological anatomy—disease was thought of as a constellation of symptoms rather than a thing in and of itself.²⁷ This kind of nosology was more logical and consistent with the humoral theory of disease, in which illness was the result of an imbalance of the bodily humors.²⁸ Diseases were not forces separate from the body, but states of imbalance *of* the body and its coextension with the environment.

I am alluding here to Foucault’s account in *The Birth of the Clinic*, and I should clarify a distinction between my argument about external agents and his contention that in clinical medicine it was “no longer a pathological species inserting itself into the body . . . it is the body itself that had become ill.”²⁹ Foucault refers to disease as the sequences of modifications that manifest in observable lesions in the body, but I’m specifically considering the cause of epidemic and endemic infectious diseases as the agents that set in motion the pathological processes that became visible to the gaze.³⁰ Where humoral medicine was more systemic, modern clinical medicine was more local: diseases affected specific tissues and organs. Once disease could be localized to “no more than a certain

²⁷ Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan Smith (New York: Vintage, 1973; repr., 1994).

²⁸ Phlegm, blood, black bile, and yellow bile. Humoral theory remained influential until the mid-nineteenth, most evident in the case of bloodletting, which was declining during this period but still in practice. Although, the idea of balance, in terms of therapeutics and pathology less related to infectious disease, continued to be present in conceptualizations of health then, as it does today.

²⁹ Foucault, *Birth*, 136.

³⁰ Porter, *The Greatest Gift*, 315.

complex movement of tissues in reaction to an irritating cause,”³¹ it was easier to conceive of medical treatment as the arrest or elimination of an external irritant. This is not to say that the idea of disease as imbalance went away; it remained influential in medical epistemology, especially for non-infectious disease. Though disease came to be understood as physiological process visible through anatomical lesions,³² this visibility facilitated the metaphor of war, in part by showing disease effects as damage, and increasingly because the language used to describe disease reified it as an agent. Thus, disease became both of and foreign to the body. However, the focus on internal irritation caused by an agent from without became more popularly—and I will suggest more strategically—understood under the logic of an invading force than as something that caused imbalance. Moreover, in the case of epidemic and endemic diseases that affected large groups of people, the import of the invasion of the biological body came into line with the idea of the invasion of the social body. Yet, as I show in the chapters that follow, this shift was not caused solely by changes to the epistemologies of medical science. It developed mutually constitutively with the way literature represented both military and civilian politics.

While the martial metaphor can be broadly conceived as picturing a kind of resistance to death, following Bichat’s definition of life as “the totality of those functions

³¹ Ibid., 189.

³² On the different epistemic modes that characterized the birth of pathophysiology, see Georges Canguilhem, *The Normal and the Pathological* (New York: Zone Books, 1989).

that resist death,”³³ the movement from humoral medicine to the medical gaze and to ontological disease objects that can be studied in and of themselves narrowed the scope of what it meant to resist death.³⁴ Medicine became a weapon to take up against foreign, ontologically discrete disease-causing agents. “Fighting” disease does fall into the spectrum of Bichat’s “resistance,” but in the case of a knowable entity that it is not of the body, this resistance comes to be more logically thought of as an active *fight*, in “defensive” (preventative) and “offensive” (allopathic) capacities, against an invader. This invader took different physical forms in the nineteenth century: contagious toxin, pestilent miasma, and microbe. These three forms and their conflation played a central role in the relationship between the martial metaphor and literature.

During the nineteenth century, three main etiological theories prevailed, three ways of understanding the causality of disease: contagionism, anticontagionism or miasma theory, and germ theory. Though the cause of disease had been debated for centuries, and all three theories, even proto-germ theory, had existed in various forms before, these discussions had never grown as contentious as they did in the nineteenth century after the matter had begun to gather polarizing political meaning.³⁵ While the three theories invoke different causal factors, a nuanced understanding of their

³³ Xavier Bichat, *Physiological Researches Upon Life and Death*, trans. Tobias Watkins, 1st American from the 2d Paris ed. (Philadelphia,: Smith & Maxwell, 1809), 1.

³⁴ While speaking specifically to germs, and early mid-century germ theory, Martin Willis uses this term when characterizing how became studied as objects of investigation leading them to be anthropomorphized agents that cause disease. *Vision, Science, and Literature, 1870-1920: Ocular Horizons*. (London: Pickering & Chatto, 2011), 23.

³⁵ Hamlin, *Cholera*, 45.

interrelationships shows that it is difficult to parse them as entirely discrete from each other, either in concepts or in periodization. Moreover, even determining who believed which theory is often difficult. Many, if not most, medical practitioners and medical-scientific stake holders believed in some blend of theories,³⁶ such as contingent contagionism, as I show in the first chapter on Mary Shelley. Finally, when sides were taken, it was often more a matter of politics than of medical science, and hung on what could be done to ameliorate or prevent the spread of disease, particularly in terms of governmental intervention. In this cultural history of the martial metaphor, we continually see the conflation of the three theories not only by medical professionals but by authors.³⁷ For the sake of clarify, however, a brief survey with some points of reference provides rough but helpful context for the etiological debates.

Contagionism posited that disease was transmitted by bodies. Contagionists debated the ultimate causes of disease—whether poison, body fluid, or even force, for example—but their shared position was that human bodies were the proximate causes of disease. Numerous historical examples, most prominently venereal disease, gave credence to contagionism. In the late eighteenth century, one of the most notable was smallpox, in large part due to the prophylactic variolization—application of smallpox-

³⁶ Gilbert, *Mapping the Victorian Social Body*, 208–09, n15. By this I mean individuals that were involved politically, such as Chadwick, had a vested interest, like W.T. Whitehead, or personal interest, like Charles Dickens.

³⁷ Erika Wright has also noted the way authors, such as Dickens, posited an epistemological ambiguity between disease theories, although her reading geared the narratological implications of such positions. *Reading for Health: Medical Narratives and the Nineteenth-Century Novel* (Athens [Ohio]: Ohio University Press, 2016).

infected human material to patient— introduced by Lady Mary Wortley Montague from her travels in the Ottoman Empire, and the development of vaccination—the application of cowpox infected material to a patient— by Edward Jenner at the end of the eighteenth century.³⁸ Before the nineteenth century, contagion was fitted into the ideas of balance and constitution posited by humoral theory as one among the climatic, dietary, and regimental external processes thought to influence the internal regulation of humors. By the late eighteenth or early nineteenth century, the focus shifted from balance and regulation to the agency of contagion itself, and more importantly, the kind of measures that could be taken to prevent it.

Quarantine, the medical intervention that defined contagionism, was military in origin and implementation. As a technology of public health, a quarantine delimits a *cordon sanitaire*, a border defining the sanitary and the contagious. The physical boundary restricts the movement of an infected population by force—a cordon, or a line or circle of soldiers, guards, or police, as we recall from Foucault’s description of the plague town. The practice of quarantine dates to the Middle Ages. For most of the nineteenth century, it was considered outdated and contrary to liberal principles, as it required the restriction both of personal freedom and of free trade through the closure of trade routes and the quarantining of ships carrying imported goods. As I will show, the idea and practice of quarantine remain as structuring tenets of the violence associated with the martial metaphor.

³⁸ It is worth noting that eastern medical tradition had practiced forms of vaccination before Western European.

Anticontagionists, also known as sanitarians, suggested that quarantine was not only wrong, outdated, and “illiberal,” but dangerous insofar as it exacerbated disease by crowding people together in unsanitary, confined conditions, as suggested by well-known proponents of miasma theory such as Thomas Southward Smith, Edwin Chadwick, and Florence Nightingale.³⁹ Anticontagionism, which was generally equated with miasma theory, pointed instead to environmental conditions as the source of disease, and thus held that the filth, lack of ventilation, and concentration of bodies produced by quarantine, and likewise the overcrowding of urbanization, would foster disease. They also pointed to the air as the transmitter of disease. Pestilent vapors were generated in foul environments, such as filth, decay, contaminated water, and excrement—often lumped under the broad rubric of “nuisance”—and spread through the air, growing more or less infectious under the influence of air quality, wind, and other factors, often including individual’s constitutions.

While miasma had appeared in humoral discourse, and might not seem to fit into the non-humoral logic as easily as contagion and germ theory because of its focus on environmental factors, it nevertheless conceptually aligns with disease as an inimical external agent: miasma invaded the body from without. Furthermore, in its relationship to biopolitics it worked to conduce populations and mobilize governmental apparatuses through the military rhetoric, especially the language of hygienic discipline.

³⁹ See General Board of Health, *Report on Quarantine* (London: Clowes and Sons, 1849), 47. See also Lynn McDonald, *Florence Nightingale on Public Health Care. The Collected Works of Florence Nightingale*, vol. 6 (Wilfrid Laurier University Press, 2004), 568.

Given that anticontagionists focused on environmental conditions, their medical interventions were reformative in nature. Sanitarians pushed for drainage, ventilation, and focused on impoverished populations, linking their disease theory to progressive politics and social reforms and making it more a “movement” than a theory. As Edwin Ackernecht notes in his influential history of this etiology, anticontagionism was focused on reform, on “fighting for the freedom of individual and commerce against despotism and reaction.”⁴⁰ The use of bellicose metaphor to describe this historical movement aside, I suggest that given these aspirations, sanitarians reinscribed the martial metaphor through populist and nationalist sentiments and internalized the larger mechanisms of the state and the military under the logics of individualism by inculcating disciplinary techniques. Moreover, although progressive and aiming to improve living conditions by cleaning up slums, miasma theory tended to reinforce classist essentializing discourses that metonymically identified the poor by their insalubrious environments,⁴¹ racializing them in the same way as primitives of tropical and colonial environments were seen as unhygienic and living in filth.⁴² Anticontagionism solidified in the political sphere during the midcentury, when a governmental agency populated by sanitarians like Smith and Chadwick advocated in favor of miasma theory and explicitly against contagionism in

⁴⁰ Erwin H Ackerknecht, “Anticontagionism between 1821 and 1867: The Fielding H. Garrison Lecture,” *International Journal of Epidemiology* 38, no. 1 (2009): 9.

⁴¹ Joseph W. Childers, *Novel Possibilities: Fiction and the Formation of Early Victorian Culture* (Philadelphia: University of Pennsylvania Press, 1995), 14, 92.

⁴² Gilbert, *The Citizen’s Body* 38. Mayhew’s *London Labour and the London Poor*, serialized in the 1840s and published as a collection in 1851, was emblematic of this kind of racialization of the poor vis-à-vis sanitary discourse.

The Report on Quarantine (1849), contributing to the ascendancy of anticontagionism as the dominant theory for the majority of the nineteenth century—roughly from the 1830s to the 1880s.

Although there had been earlier theories of living and infectious “germs,” of *contagion vivum*, as in the pre-germ contagion and miasma theories,⁴³ the work of Joseph Lister, Rudolph Virchow, Louise Pasteur, and Robert Koch from the mid-century onward culminated, in a sense, with Koch’s discovery of the tuberculosis bacterium, *Mycobacterium tuberculosis*, in 1882, and his publication two years later of the criteria for determining whether a microorganism causes a disease, in what came to be known as “Koch’s Postulates” (1884). Although it has been suggested that the lay public did not fully embrace germ theory until the early twentieth century, from the 1880s on conversations about infectious disease tended toward the microorganismal idiom, which drew the attention of writers such as Conan Doyle, Stoker, Conrad, and H. G. Wells.

Often cited with respect to germ theory and microscopy, Arthur Conan Doyle’s Sherlock Holmes claims a threat “cease[s] to be dangerous if we [can] define it.” Microbiology served this function, but it did so through the grammar of war. In one sense, that is, the martial metaphor ameliorates the existential threat posed by infectious disease by giving a narrative frame, agency, and meaning to an entity or process that has

⁴³ Proto germ theories, such as *contagium vivum* had been hypothesized by those building off of the work of Anton van Leeuwenhoek and Robert Hooke, such as British physician Nicolas Andry (1700) who posited that disease like small pox were caused by living “worms” or Richard Bradley who suggested poisonous insects were responsible for miasmatic pestilence. Margaret DeLacy, *The Germ of an Idea: Contagionism, Religion, and Society in Britain, 1660-1730* (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2016), 75-101.

no motive, only a drive to reproduce. As I will show, this legacy did not arise simply from the visibility of and the new research into bacteria, but reformed the military legacies and politics of contagion and miasma theory in a new way that magnified the rhetoric of war in medical discourse. Yet germ theory was a notable point of inflection in development of the martial metaphor, as it personified diseases as living and self-reproducing. Germ theory brought together the conflicts of contagion and miasma theory: disease could be communicated between bodies and also arise from decaying organic matter.

It is understandable that scholars such as Sontag and Alfred Tauber date the martial metaphor to the 1880s and the rise of germ theory.⁴⁴ As I contend in the later chapters, addressing the advances of bacteriology in the 1880s, once germ theory had allowed for living entities that could be seen in the microscope and could be the source of diseases by “attacking” cells after penetrating the boundaries of the body, the militarization of medicine became even more natural. The “gospel of germs” was comforting, showing scientific progress and promising new treatments,⁴⁵ but it also gave new force to the martial metaphor: although the microbe came under the microscopic medical gaze, it remained invisible to the naked eye, in contrast the perceivable filth of miasma. If disease was ubiquitous, colonizing both the body and the quotidian

⁴⁴ Sontag, *Illness as Metaphor*, 65-66. Tauber, *Immunity* 1.

⁴⁵ I borrow the term here from Nancy Tomes, who provides an extensive account of panic and promises of germ theory in American culture in the late nineteenth and early twentieth century. *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge: Harvard University Press, 1998).

environment regardless of one's social position, then the martial metaphor was a way to understand and respond to this new order of the world. Germ theory gave disease a conceivable "face" and new possibilities for being anthropomorphized,⁴⁶ which gave new specificity to Bichat's definition of life with respect to disease. The medical gaze moved from tissue to cell; its focus, from object to target. That said, we cannot conflate the martial metaphor's reinscription in germ theory as its origin, we must consider the way the earlier legacies of disease created the conditions for this construction of germs as enemy, and bacteriology as war.

Addressing Bichat's notion of resistance also requires accounting for Darwinian evolutionary theory and its "struggle for life." Darwin himself uses the war metaphor to discuss the relationships between species and resources and within species in terms of sexual selection in *The Origin of Species* (1859) and *The Descent of Man* (1871), although significantly less often than he uses *struggle* and *fight*.⁴⁷ Gillian Beer has noted

⁴⁶ Willis, *Vision, Science, and Literature*, 23.

⁴⁷ For instance, with respect to sexual selection Darwin writes, "How low in the scale of nature the law of battle descends I know not; male alligators have been described as *fighting*, bellowing, and whirling round, like Indians in a *war-dance*, for the possession of the females; male salmons have been observed *fighting* all day long; male stag-beetles sometimes bear wounds from the huge mandibles of other males; the males of certain hymenopterous insects have been frequently seen by that inimitable observer M. Fabre, fighting for a particular female who sits by, an apparently unconcerned beholder of the struggle, and then retires with the conqueror. The *war* is, perhaps, severest between the males of polygamous animals, and these seem oftenest provided with *special weapons*. The males of carnivorous animals are already well *armed*; though to them and to others, special means of *defence* may be given through means of sexual selection, as the mane of the lion, and the hooked jaw to the male salmon; for the *shield* may be as important for victory as the *sword* or *spear*." *The Origin of Speices* (New York: Signet, 1859; repr., 2003), 84–85.

presence of this analogical form in Darwin's work.⁴⁸ While it remains relevant to the broader cultural context of science and medicine, and to their social and political consequences such as social Darwinism, Darwin's use of the metaphor is not a response to the military in exactly same way as the other authors I discuss.

I am suggesting that the martial metaphor emerged in the nineteenth century from the practice of military medicine, so it is important to clarify the concept of life specified by medicine, especially vis-à-vis the broader ideas of Bichat's *resistance* and Darwin's *struggle*. Struggle, like resistance, very broadly characterizes violent efforts in contest, whether in a sports match, combat between armies, or as was suggested to me in an early version of this project, "peasants with pitchforks." This dissertation specifically addresses *medicine* and *war*, rather than the semantic hyponyms *life* and *struggle*, although these broader concepts do inform some iterations of the metaphor of war, for instance the notions of life in Kinsley's fiction and sanitary lectures, as I will show in chapter two, and the discourse of eugenics in part II. Given this focus, the texts I discuss track how literary authors reflect on the relationship between medicine—the technology to foster life in the face of disease—and the military—the institutions, bureaucracies, logics, and imperatives of state-sponsored armed forces, not just of struggle in general.

As the shifting and problematic notion of race and that of heredity became increasingly biologized in the nineteenth century—and inherited conditions were

⁴⁸ *Darwin's Plots*. See also Al-Zahrani, "Darwin's Metaphors Revisited: Conceptual Metaphors, Conceptual Blends, and Idealized Cognitive Models in the Theory of Evolution." More recently, Devin Griffiths has expanded on the role of analogy, and metaphor more broadly at length. *The Age of Analogy: Science and Literature between the Darwins* (Baltimore: Johns Hopkins University Press, 2016).

conflated with infectious disease, mistakenly and rhetorically—biopolitical logics drew on the specific evolutionary theory of degeneration. We see this in Kingsley, but through the influence of Herbert Spencer, Max Nordau, and Robert Galton, among others, degeneration played a larger role in fiction and medical prose—in martially metaphorical terms—in the last quarter of the nineteenth century, as is evident in the writings of Conan Doyle, Stoker, and Conrad. In this capacity, foreign and internal racial others become threats to national identities, and the middle-class body indexes the nation’s health and, by metonymic extension, the nation itself.⁴⁹ The struggle to maintain racial purity in these terms, was written through the martial metaphor, particularly when medical interventions such as eugenics came into the fold. This kind of thinking has a longer history in terms of the broader, governmental interest in intervening and mitigating biology.

The Martial Metaphor “in Theory”

The martial metaphor worked as a tool of biopolitical governance: a mechanism to regulate populations and foster the self-fashioning of individuals, which together mitigated the biological obstacles to expanded urbanization, industrialization, and colonization, and most notably the increased risk of disease. Biopolitics refers to a shift in political thinking and operation where “life itself” became the object of governance. For Foucault, this was a radical transformation in the techniques and imperatives of sovereignty whose occurrence was “the threshold of modernity.” Life became at once

⁴⁹ Gilbert, *The Citizen’s Body* 8–9.

abstracted from individuals and directed, calibrated, and shaped at the level of populations, through the operation of disciplinary apparatuses for determining how individuals fashioned themselves as healthy and productive subjects—how they invested themselves in the liberal model of *homo economicus*.⁵⁰ The government's targeting of life—in terms of mortality, morbidity, and birth rates, for instance—became co-constitutive with the rise of biological science, statistics, and biomedicine.⁵¹ These kinds of calibrations secured the labor force and indeed the very state against disease and scarcity, as preemptions and calculated allowances for Malthusian checks.⁵² This was especially the case with endemic and epidemic disease. Foucault provides a way to think of the relationship between these two forms of disease and biopolitics that is worth quoting in full:

At the end of the eighteenth century, it was not epidemics that were the issue, but something else—what might broadly be called endemics, or in other words, the form, nature, extension, duration, and intensity of the illnesses prevalent in a population. These were illnesses that were difficult to eradicate and that were not regarded as epidemics that caused more frequent deaths, but as permanent factors

⁵⁰ See *The Birth of Biopolitics: Lectures at the Collège De France, 1978-79* (Basingstoke England; New York: Palgrave Macmillan, 2008).

⁵¹ On the relation between biopolitics see Ian Hacking, *The Taming of Chance, Ideas in Context* (Cambridge England ; New York: Cambridge University Press, 1990). For more recent work in Victorian studies in this vein, see Choi, *Anonymous Connections*.

⁵² As has been noted, in his lectures of biopolitics, Foucault doesn't address Malthus directly; however, here I think it is a productive way to think about security apparatus posited by Foucault that makes allowances for limits in the circulation of supplies and frequency of epidemic disease.

which...sapped the population's strength, shortened the working week, wasted energy, and cost money...In a word, illness as phenomena affecting a population. Death was no longer something that suddenly swooped down on life—as in an epidemic. Death was now something permanent, something that slips into life, perpetually gnaws at it, diminishes it and weakens it.⁵³

This might seem counter to the logic of the martial metaphor, as, per Foucault, disease is no longer an angel of death that “swoops down on life” and the concern is no longer epidemics. Of course, epidemics were still a major problem, as we will see in the case of cholera in part I; the point to take from Foucault here is not that epidemic disease went away at all, but rather that its permanent presence became part of the governance and definition of life—of death, in this case. Infectious disease wages a war of attrition that must be perpetually held at bay.

The reason illness became a central concern of the state was the shift of focus to the population. Before the biopolitical regime, the *population* as we understand it today didn't exist. The rise of liberalism, voting, statistics, and other relations that enabled biopolitics in the eighteenth century changed the very notion of population. Once, it meant a group of people living in an area of land—more an accidental corollary to the primary object of government: territory. But with the rise of biopolitics, the abstraction of life from people into populations became the reason for the sovereign's existence and the target of governance—a mode that became productive rather than deductive. Its primary

⁵³ *Society Must Be Defended: Lectures at the Collège De France, 1975-76*, trans. David Macey (New York: Picador, 2003), 243

purpose was to make the population live, to focus not just on safety but on security. Territory, through its relations to the circulation of air, grain, and bodies, became one means to manage life at the population level.⁵⁴ This mode of biopower⁵⁵ sought to “make live” and “let die,” instead of making death and allowing life⁵⁶—the latter being a technique of the juridical apparatus exemplified in Foucault’s spectacle at the scaffold, although, as I will show in the chapter on *Dracula* and quarantine, the juridical apparatus remained central to the mechanisms of medical power and governance.

Liberalism and individualism formed the logic of the modern “social body” made up of individual “lives” and “cells,” leading to biopolitical formations as individual health became central and necessary to the maintenance of the health of the social organism.⁵⁷ Although this kind of thinking, specifically in terms of “cells,” appeared after Rudolf Virchow’s cell biology (1855) and Robert Koch’s bacteriology in the 1880s,

⁵⁴ *Security, Territory, Population: Lectures at the Collège De France, 1977-78* (Basingstoke; New York: Palgrave Macmillan: République Française, 2007), 19.

⁵⁵ Although Foucault is not full consistent in his definition of the term *biopower* versus *biopolitics*, Hardt and Nergi claim the former is the “power over life” and the latter is the power of life “to resist and determine alternative subjectivities.” Michael Hardt and Antonio Negri, *Commonwealth* (Boston: Harvard University Press, 2009), 59.

⁵⁶ Foucault, *Society*, 243. See also *Security*, 104.

⁵⁷ I follow Gilbert’s broader, “catholic,” understanding of liberalism, which accounts for economic theories of Smith and Mills which espoused social responsibility while retaining a Kantian understanding of the self as individual, but specifically refers to the “overarching philosophy of government” in the nineteenth century that developed from Enlightenment ideals: such as that government should be representative, in some capacity and develop society; operate on consent rather than force; be contingent upon the free circulation of labor, capital, goods, and the “inviolability of property.” At its core, liberalism was a “capitalist and possessive individualist vision.” *The Citizen’s Body*, 2, n1.

Roberto Esposito notes⁵⁸ that the paradigm of middle-class healthy subjectivity began to take shape around the midcentury. The way the middle-class body became the index for the nation was in line with the rise of sanitary reform, for which middle-class domesticity and morality became the model, as Gilbert and Otis have argued, and as is evident in Chadwick's and Nightingale's work.⁵⁹ Middle-class morality, domesticity, and hygiene became the order imposed on the working classes to make them proper, healthy subjects.⁶⁰ This imperative was frequently carried out in the language of the martial metaphor, which became a mode of empowerment, a technique for producing a healthy subjectivity for an individual, as I will show with Kingsley's writing. The representation of medicine as war connected individual health with aggregate public health, linking the different orders of cell, body, and society. Following the logic of Bichat's definition of life as the set of functions that fight against death, each individual life is always already at war with death and must produce its own health, often through techniques derived from the needs and practices of the military. This construction, however productive,

⁵⁸ Roberto Esposito, *Immunitas: The Protection and Negation of Life* (Cambridge; Malden MA: Polity, 2011), 128.

⁵⁹ Gilbert, *The Citizen's Body*, 8. Joseph Childers speaks to this in terms of how Edwin Chadwick "writes the poor" when he imposes middle class norms and sexuality in his *Sanitary Report*. Joseph W. Childers, *Novel Possibilities: Fiction and the Formation of Early Victorian Culture* (Philadelphia: University of Pennsylvania Press, 1995), 96-97. See also Mary Poovey makes a similar claim in her chapter on Nightingale in *Uneven Developments: The Ideological Work of Gender in Mid-Victorian England* (Chicago: University of Chicago Press, 1988).

⁶⁰ Gilbert, *The Citizen's Body*, 9. "Britishness equals Englishness equals, by the end of the period, the healthy (clean, isolated), white masculine, middle-class body. Women became the privileged site of production of this body through their ability to construct an appropriately domestic sphere." (ibid)

shaped liberal subjectivity as inherently pathological, as always sick, if not actually then potentially.

The genealogical origins of liberal governance and the martial metaphor suggest that this imperative was not quite so affirmative in producing life or so passive in allowing to die, largely because of their historical connections to military science and the logistics of war. The inherent pathology of the liberal subject fosters the conditions for what Julian Reid calls “logistical life”: “life that is lived under the duress to be efficient,” which comes not from the actual shifting of regimes of war to those of peace, but from the logistical orders in which life is shaped by the organizational needs of the modern state to prepare for war.⁶¹ In this vein, making life live under the logics of liberalism requires waging war on behalf of life.⁶² The history of disciplinary techniques shows that the production of individualizing subjectivities as a mode of control can be traced to military practices such as hygiene, self-surveillance, regularized schedules, and proper divisions of bodies in space. Reid extends this to suggest that the military history of the disciplinary apparatus is coextensive with the way liberal modes of regulating populations grew out of military strategy and logistics to produce a population’s vitality, to make it live to defend its way of life.⁶³

⁶¹ Julian Reid, *The Biopolitics of the War on Terror Life Struggles, Liberal Modernity and the Defence of Logistical Societies* (Manchester: Manchester Univ Press, 2009), 13, 18.

⁶² Michael Dillon and Julian Reid, *The Liberal Way of War Killing to Make Life Live* (London; New York: Routledge, 2009). See also Reid, *The Biopolitics of the War on Terror*.

⁶³ *The Biopolitics of the War on Terror*, 35.

The idea of the state defending its own way of life, as the self, through both disciplinary apparatus and regulatory biopolitics also speaks to the conceptual connections between war and the history of immunity as a concept. Cohen contends that “immunity emerges at the end of the nineteenth century to naturalize the military model as the basis for organismic life.”⁶⁴ I follow this genealogy but suggest that it is crucial to look at the metaphor of war specifically, and that immunity, like germ theory, is just one component of this ubiquitous construction that defines medicine as practice and politics in the language of war. Immunity is a point of inflection of the martial metaphor, where the previous logics of miasma and pre-germ contagion are internalized in the body and provide an oppositional ontology to counter microbial life. Moreover, in the case of English history specifically, I suggest that literary prose and form are central to this intellectual formation, one that draws not just from the idea of war, but from the material practices of applying medical technology to the military itself in the form of military medicine. Thus, the idea of immunity as the defensive and regulatory function of the liberal subject developed in the nineteenth century through a linguistic construction with material origins—the metaphorical war that structures medical thought and practice. It is in this way that medicine became war by other means. The martial metaphor abstracts its military origins, making their connections seem purely metaphorical by naturalizing the

⁶⁴ Ed Cohen, *A Body Worth Defending: Immunity, Biopolitics, and the Apotheosis of the Modern Body* (Durham: Duke University Press, 2009), 20. On the immune system as defense see also Emily Martin, *Flexible Bodies: Tracking Immunity in American Culture from the Days of Polio to the Age of Aids* (Boston: Beacon Press, 1994); Haraway, Donna. “The Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse.” *In Biopolitics: A Reader*, edited by Timothy Campbell, 274-309. Durham; London: Duke University Press, 2013.; Esposito, *Immunitas*.

connections between the use of medicine to defend the body's life and the use of actual war to defend and state's "way of life." This metaphorical abstraction makes invisible the violence imbedded in biopolitics. When we trace its history through the relationships between literature, medicine, and the military, it becomes clear that this kind of language and thought is a tool for inciting populist and nationalist sentiments, often against foreign and internal others, "killing to make life live." In her well-known study of the outbreak narrative, Priscilla Wald suggests that "biopolitical strategies . . . are neither self-evident nor are they static; they must be made meaningfully and continually reproduced."⁶⁵ This is precisely one of the central cultural works of the martial metaphor.

The military origins, logics, and techniques that morphed into the metaphor of medicine as war were occluded by the very metaphORIZATION of these material connections between medicine and the military. Literature participated in this occlusion by abstracting the martial vocabulary from the institutions of the military, naturalizing the connection between medicine and war, and inculcating the resulting intellectual formation in the individual. And like the move from the juridical to the disciplinary, this was not a clear break but a gradient, with both the material and figurative medical wars remaining mutually constituting⁶⁶ while the martial metaphor circulated in the popular imaginary. The military fight against disease became public health, which became the personal,

⁶⁵ *Contagious*, 58.

⁶⁶ By mutual constitution here, I mean the recursive relationship where medicine also shapes war, in turn, from war's influence on medicine. The development of racial medicine and hygiene, and chemical and biological weapons being of the most nefarious products.

disciplinary battle for health, and in the age of immunity the “natural” operation of the body’s “defense” system; shifting from metonymy to metaphor in degrees. The authors discussed in the following chapters mark these degrees in various intellectual, political, and medico-scientific shifts, and through significant moments in the military history of the Victorian era.

The way literature hides the metaphor’s material military origins speaks to the relation between medicine and visible, violent, seemingly draconian forms of state power. In his theorization of “bare life,” natural life exposed to the state of exception, Giorgio Agamben suggests that the concentration camp is emblematic of, even the “hidden matrix” of modern politics.⁶⁷ This is a useful way of thinking of the martial metaphor’s genealogy. I suggest that the martial quarantine, the *cordon sanitaire*, lies at the heart of modern medicine, at its intersection with politics.⁶⁸ Yet, as Agamben notes, this materialization only makes visible the presuppositions that define sovereignty. The martial metaphor operates in a similar fashion, a case we see with the Victorian invention of the concentration camp, as I discuss in chapter four. The military quarantine, so visible in contemporary post-apocalyptic, outbreak, and zombie narratives, is always present in the mundane medicalization of society, the various ways medicine inhabits everyday life:

⁶⁷ This follows Hannah Ardent’s study, where she sees the camp as the expression of absolute sovereignty, the essence of totalitarianism. *The Origins of Totalitarianism* (New York: Harcourt, Brace & World, 1966).

⁶⁸ Alison Bashford utilizes this term in terms of eugenic, colonial public health imperatives, which she argues began in 1880s. She suggests many forms of “public health mechanisms can be understood as *cordon sanitaires* between present and future generations.” Alison Bashford, *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health* (Houndsmills: Palgrave Macmillan, 2004), 13.

the guiding of self-fashioning for optimal health with fitness trackers, the overprescription of antibiotics in the total war against bacteria since the development of penicillin, the epidemiological simulations, by governmental organs like the Centers for Disease Control, the statistical calculations of genetic risk,⁶⁹ and the Western anxieties about the 2014 Ebola outbreak, to name a few.

“Medicine Is War” uncovers the formation of modern medicine’s hidden military matrix. I don’t mean to suggest, ahistorically, that the martial quarantine has always operated in the same way since its origins in the Middle Ages. It certainly is in many ways opposed ideologically to liberalism and the mid-century sanitary movement, which focused on environment rather than bodies. In the nineteenth century, even as it was increasingly becoming political and medical anathema, it always remained a possibility: the military quarantine could become the “medical” state of exception enacted at any moment, and it certainly was in various epochs in the Victorian era, as it still is today. As war remains the substratum of medicine through the martial metaphor, this dissertation unravels the ways the martial quarantine functions both overtly as a state of exception and implicitly as a structural mechanism underneath the affirmative, productive imperative of biopower—the way in which medicine, from individual hygienic practices to public health, from the Victorian era onward, wages the perpetual war against disease.

⁶⁹ Nikolas S. Rose, *Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century* (Princeton: Princeton University Press, 2007).

Overview

Literature allows for a fuller understanding of the consequences of science and technology than the narrower focus on certain dimensions that medical prose, with its generic conventions, tends to prioritize. By using literature to understand medical science, we can reveal the complex, ambiguous, and overdetermined implications medicine has in other, ostensibly non-medical aspects of life; it allows us to unravel the complexities in the medicalization of society.

This multidimensional quality that literature affords is especially present in the case of medicine and the Victorian novel, given the rise in the social status of the medical profession, and the consequent emergence of the doctor as a frequent hero of Victorian fiction.⁷⁰ Through the diversity of perspectives, narrative engagements, and dialogical operations, reading fiction alongside medical prose reveals the tensions that emerge from the martial metaphor: the questions it poses and answers reveal about what it meant to be British at various points in the nineteenth century; the implications of medical interventions for personal liberty, political economy, and social justice; and the problematic use of medical knowledge as a tool for colonization and as a weapon to diffuse the strength of enemy armies, effects I suggest in the second part of this dissertation

⁷⁰ Tabitha Sparks, *The Doctor in the Victorian Novel: Family Practices* (Farnham: Ashgate, 2010), 53; Gilbert, *The Citizen's Body*, 53. The disciplinary function of the Victorian novel in the production of subjectivity has been well established by D.A. Miller and Nancy Armstrong among others. See Miller, *The Novel and the Police* (Berkeley: University of California Press, 1988); Armstrong, *Desire and Domestic Fiction: A Political History of the Novel*. New York; Oxford: Oxford University Press, 1989.

I focus on novels that develop extended meditations on the relationship between military medicine and public health. Each chapter details the ways specific authors incorporate the martial metaphor in their fiction and draw from contemporaneous developments and instances of military medicine, be they full scale conflicts such as the Napoleonic, Crimean, and Boer Wars, or supportive deployments for colonial endeavors in India and Africa. “Medicine Is War” does not provide the evolution or a generic survey of the martial metaphor, nor an “objective history” of its iterations, but a genealogy of the metaphor as an intellectual formation.

“Medicine Is War” is divided into two sections that give a historical shape to the way literature mediated the relationship between medicine and the military, through the debates over disease theories, the shifting question of national identity in racialized terms, and the expansion of empire. In Part I, I discuss how Mary Shelly and Charles Kingsley conflated the cholera epidemics of the first half of the nineteenth century with war in the context of the debates between contagionism and anticontagionism. Cholera catalyzed the martial metaphor’s co-constitution with the discourses of public health and hygiene, as the disease was central to those debates. After the 1817 pandemic, England suffered four major cholera outbreaks. Through to the mid-1860s, cholera was at the center of the development of public health, the modernization of government, and the defining of the nation in the public imaginary, leading into the racial and gendered paradigms that took hold in the middle of the century and the nationalistic drive at the beginning of the twentieth.⁷¹ When epidemic cholera invaded England in 1831 and was suddenly no

⁷¹ Gilbert, *Cholera and Nation*, 4.

longer relegated to the colonial world, it challenged the naturalized salubrious identity of Britain as a land and a people. In chapter one, I show how the recurrence of military language in discussions of disease, and the narrative function of war in Shelley's *The Last Man* (1826) respond to the emergence of the metaphor in the medical prose of the early nineteenth century in response to the 1817 cholera pandemic. Shelley's novel also marks a significant moment in the rise of the metaphor by emblemizing the movement from humoral to contagionist and anticontagionist etiologies. Shelley reflects on and develops the way the military medical responses to the cholera pandemic take the form of the language of militarism in medical discourse by navigating the nebulous conceptual boundaries between disease theories. Her novel articulates the movement away from Romantic medical discourse, influenced by pre-nineteenth century disease theories, and toward Victorian imperatives of purity and defense. *The Last Man* challenges the martial metaphor, while also contributing to its use. It circulates the metaphor as a central and recurring thematic and fosters a response to the proposition that Britain is not essentially more resilient to disease than colonial lands. At the same time, it critiques warfare as an amplifier of disease, specifically commenting on how Britain enabled the spread of the first cholera epidemic through military movement during the 1817 cholera pandemic. Being published in 1826, the novel's temporal proximity to the first major epidemic to hit England, in 1831, shows how discourse of military medicine—and its relations to civilian medicine, which the novel also reflects—primed England's adoption of the language of war to respond to cholera as a foreign invasion.

In chapter two, I show how Charles Kingsley develops the relationship between cholera and the martial metaphor by linking the disease's effects on military efforts during the Crimean War to England's third cholera outbreak, which was happening at the same time. Kingsley writes the martial metaphor across his textual corpus: sermons, pamphlets to soldiers in Crimea, and sanitary lectures. The other deployments are tied together. His post-Crimean condition-of-England novel *Two Years Ago* (1857) uses the martial metaphor as a central plot device. Tom Thurnall, a military surgeon, defends a small Cornish town against a cholera outbreak at the advent of the Crimean War. A highly popular novel, *Two Years Ago* not only narrativizes the metaphor in an extended form, it indexes the way Kingsley uses the metaphor to weave the Church, the domestic space, the battlefield, and the public sphere together, treating it as a biopolitical tool in the exercise of governmentality, which at once empowers individuals as self-fashioning agents and guides their conducts through the reification of gender scripts. Furthermore, he develops this unified battle of men and women against disease by situating the biological science of anticontagionism within the familiar Christian framework of original sin. Kingsley cuts across class and gender lines by giving citizens an agent to develop their subjectivities against: cholera, both a disease in its own right and a metonym of death and disease generally. These middle-class sanitary practices not only empowered subjects to govern their own health, but made this a duty, not only to God but to the nation, making some of the older theocentric views of disease conducive to the modern military model.

Part II addresses the links between empire, race, and germ theory in the second half of the nineteenth century, as articulated in the writings of Stoker, Doyle, and Conrad. I investigate epistemological changes to the understanding of disease as caused by living, replicating organisms, and to the understanding of the body's response in terms of the counteracting logic of immunity toward the end of the century. The development of germ theory, immunity, and organic chemistry gave medicine a weapon in the form of modern pharmacology. Thomas Huxley, biologist and comparative anatomist, wrote in 1881 in the relatively new journal *Science*: "It will, in short, become possible to introduce into the economy a molecular mechanism which, like a very cunningly-contrived torpedo, shall find its way to some particular group of living elements, and cause an explosion among them, leaving the rest untouched."⁷²

Before moving on to the development of these pharmaceutical torpedoes—quinine, atoxyl, even Koch's failed cure for tuberculosis—chapter three shows how Bram Stoker delves into military history to reflect on and respond to anxieties over the fin de siècle and the future of the British as a people. In its recurring use of the martial metaphor, explicitly and as a narrative logic, *Dracula* (1897) sublimates racial threats to the purity of the nation into both an ancient military threat and a modern form of disease. While the former draws on the mythic narrative of the Crusades, the latter constructs the vampire as an anachronistic overdetermined form of disease: at once contagion, germ, and microbe. In this chapter, I show how *Dracula* works through the anxieties of military

⁷² "The Connection of the Biological Sciences with Medicine," *Science* 2, no. 63 (1881): 26.

medicine in terms of the Crimean War and tropical medicine. In looking into the past at the Crimean War, the novel speaks to the conflict's future military medical implications through its representation of women's sexuality as a response to the Contagious Disease Acts, legislation that policed female sex workers in an effort to curb the high rate of syphilis among enlisted men. Stoker narrates the violent response to the CD Acts' repeal by reflecting this "war waged against impure women," in the words of Josephine Butler from her famous pamphlet advocating for the Acts' repeal.⁷³ Developing the institutional influence of the military on Victorian life, *Dracula* also speaks to the material connections between medicine and the military and to the novel's contemporaneous reflection of the military's involvement in the developing field of tropical medicine through the figuration of blood and of the vampire as parasite. In these capacities, Stoker's novel imbues military logics into the anxieties of reverse colonization and degeneration attached to the foreign vampire, making the fight for the nation one fought by doctors.

Looking more specifically at Koch's bacteriological research into tuberculosis and the developing field of immunology, chapter four considers how Doyle writes the martial metaphor ambivalently in his fiction and prose. Before the Second Boer War (1899), the metaphor operates as subtle guiding logic in his detective fiction, through the forensic and toxicological work of Sherlock Holmes and the military medical background of John Watson, especially when read in conversation with Doyle's popular prose on medical science. Bacteria begin to appear in Doyle's fiction, as do diseased military

⁷³ *The Constitution Violated: An Essay* (Edinburgh: Edmnston and Douglas, 1871), 91.

personnel, after the Second Boer War, when Doyle himself embodied the medical military background of Watson by serving as a surgeon in South Africa.

In the second part of this chapter, I suggest that it is in response to Doyle's experiences of the failed vitality and martial prowess of British military, and of the governmental institutions that were supposed to support them, that bacterial threats become weaponized, as in "The Adventure of the Dying Detective," and soldiers become diseased, as in "The Adventure of the Blanched Soldier." By tracing Doyle's shifting representations of the intersections of the military and medicine, and the explicitness of his use of the martial metaphor, we can see the anxieties of degeneration imposing on national defense, and an uncertainty about the power of bacteriology to secure the nation against imperial threats. Doyle drew attention to the facile inoculation of anxieties over the weakening of the British race, which bolstered the need to think of medicine as war. In his changing manner of representation, his writings show the progressive naturalizing of the metaphor as a way to understand disease, and its rhetorical power in pathologizing Englishness in the age of empire.

In the final chapter, I show how Joseph Conrad reverses the discourse of degeneration by suggesting that the medical evolution wrought by the development of British tropical medicine facilitated the atrocities in the Belgian Congo and the fostering of disease in the native populations. Through the use of modernist indeterminacy, Conrad challenges the martial metaphor that was promoted in both medical and public circles by tropical medicine specialists like Ronald Ross. In Conrad's picture, European health

functions as a weapon of empire, turning the “white man’s grave” into a grave for the native Congolese.

I conclude this chapter with a discussion of the sleeping sickness epidemic in the Congo (1899–1905), which served as a laboratory for testing atoxyl, a precursor to pharmacologist Paul Ehrlich’s famous “magic bullet,” a theory that facilitated the development of the first antibiotic drug, Salvarsan, and the chemical weapon Lewisite, showing the recursive relationship of medicine and the military that continues into the contemporary moment. In this connection, as highlighted by a reading of *Heart of Darkness*’s representations of tropical disease in the form of the Congolese and health in the form of the preternatural vitality of the notorious General Manager, it becomes clear how the military history of tropical medicine was central to the emergence of antibiotic pharmacology, solidifying the metaphor’s attachment to the development of penicillin in the mid-twentieth century, perhaps the most significant medical advancement up to that point.

I close “Medicine Is War” with a short reflection on the martial metaphor’s historical impact on current medical concerns, specifically antibiotic resistance, the response to the 2014 Ebola pandemic, and the “war on cancer,” bringing to bear this project’s intervention in Victorian studies in to the medical humanities.

I trace the martial metaphor’s arc from Shelley to Conrad, reflecting a movement from Romanticism to Modernism, not to simply follow conventional literary periodization, but rather to articulate how authors reacted to and propagated the martial metaphor even while they critiqued its effects: in the opening and concluding chapters I

show how, even while using the metaphor's language, both Shelley and Conrad mark the way militarism breeds disease, and their use of the martial metaphor amplifies this effect. In this genealogy, I reveal the relationship between these genres' representations of the changes in medical science and medical politics: from humoral theory to contagionism and anticontagionism, from miasma to the germ, and from anecdotal treatments to evidence-based pharmaceutical torpedoes.

* * *

Tracing the martial metaphor through Victorian literature and culture lets us answer the question of what war has made thinkable and actionable: the use of medicine as a tool of governance, linking individual health to aggregate public health, justifying dividing practices and internal race wars—the medical spectrum of the normal and the pathological, extrapolated outward to populations, makes the impossible yet desirable dream of the hermetic subject and nation a necessary fantasy.

Max Weber famously articulated the progress of Enlightenment rationalism in modernity: the movement toward a secularized worldview that values scientific knowledge over religious and superstitious belief systems. In a similar vein, Foucault concludes that with the rise of the medical gaze, “Disease breaks away from the metaphysic of evil; and it finds in the visibility of death its full form of content appears in positive terms.”⁷⁴ While the discourses of evil does not go away completely in the nineteenth century, the movements we see, from humoral medicine through the debates between contagionism and anticontagionism, all the way to germ theory, would certainly

⁷⁴ Foucault, *Birth*, 196.

disenchant theocentric understandings on which disease is a form of divine punishment; twentieth century refinements of microbiology would surely dispel the racial and classist biases of nineteenth century disease theories. Positivist science and clinical and evidence-based medicine would seem to have objectified disease theory and freed it of cultural mythologies. However, “Medicine Is War” shows that while the understanding of disease was modernized through the development of scientific medicine, it was simultaneously “reenchanted”: the relationship between humans and infectious disease was narrativized into a metaphorical war, a process represented in and facilitated by literature, which veiled the military history that structures modern medicine and its place in the governance of life itself.

Chapter 1: Denaturing the Martial Metaphor in Mary Shelley's *The Last Man*

In reference to the arrival of a foreign epidemic that had been sweeping across tropical and colonial regions, Lionel, the narrator-protagonist of Mary Shelley's 1826 *The Last Man*, contends that England will "fight the enemy to the last. Plague will not find [it] ready prey, as [the English] will dispute every inch of ground."¹ In an emblematic deployment of the martial metaphor, Lionel conflates the incursion of a disease into a new population and region with an invasion by a foreign military coming, as the English had come so many times before the novel was written, to conquer and colonize. Opposing the weaponized construction of disease, Lionel expresses confidence that the English will "blunt the arrows of pestilence" (214). By the end of the novel, however, it becomes clear that this kind of thinking is more than just optimistic; it is a fantasy: "Death had never wanted weapons wherewith to destroy life, and we, few and weak as we had become, were still exposed to every other shaft with which his full quiver teemed" (*LM*, 340). What is interesting about *The Last Man* is that, despite being the first nineteenth-century text to deploy the metaphor extensively, it also pushes the metaphor to its limit to critique it. The novel not only draws attention to the fictiveness of the construction; it challenges the efficacy of this kind of language and questions its political and ethical implications.

No work of fiction from the early nineteenth century engages more thoroughly with the martial metaphor than *The Last Man*. The ubiquitous presence of death certainly reflects the many deaths, especially to disease, that Shelley experienced before publishing the novel, as a number of critics have noted.² There is, however, a more significant context for understanding her

¹ Mary Shelley and Pamela Bickley, *The Last Man* (Hertfordshire: Wordsworth Classics, 2004), 196. Hereafter cited parenthetically in the text as *LM*.

² Anne Kostelanetz Mellor, *Mary Shelley, Her Life, Her Fiction, Her Monsters* (New York: Methuen, 1988), 141; Barbara Johnson, "The Last Man," in *The Other Mary Shelley: Beyond Frankenstein*, eds. Audrey A. Fisch, Anne Kostelanetz Mellor, and Esther H. Schor (New

representation of disease as an enemy by using a metaphor that was neither quite idiomatic nor *conceptually* metaphorical³ at that time. Her metaphorization of medicine as war was not an anomaly, however; rather, it signals a point of inflection at which medical discourse, informed by colonialism, militarism, biopolitics, and the tension between what we now call the Victorian and the Romantic, began to change its understanding of the relationship between disease, the individual, and the social body. The shift from the pre-nineteenth-century humoral and climatological theories to the contagion and miasma theories in their English forms is a not clear-cut one, and it did not depend solely on medico-scientific developments and social research such as Edwin Chadwick's *Sanitary Report on the Labouring Population of London* (1842). It was in this flux that the martial metaphor first gained cultural purchase.

Its 1826 publication situates *The Last Man* among several significant moments in medical and literary history, making it particularly well-attuned to the nexus of actors and discourses that shaped the way medicine was known, practiced, and applied to statecraft at that time. The first third of the nineteenth century saw the rise of pathology and anatomy, and consequently of the medical gaze, a discourse Shelley engages with in her best-known novel, *Frankenstein* (1818), and which is intimately related to Bichat's definition of life as the set of functions that resist death.⁴ This time period saw the beginnings of a movement away from humoral theories of disease, which describe medicine and health in terms of balance and were connected to climatological theories that focused on the weather's influence on environmental conditions. The

York: Oxford University Press, 1993), 6.

³ George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 2003), 1, 5.

⁴ See Janis McLarren Caldwell, *Literature and Medicine in Nineteenth Century Britain: From Mary Shelley to George Eliot*, Cambridge Studies in Nineteenth-Century Literature and Culture (Cambridge: Cambridge University Press, 2004).

period also saw anxieties over inoculation and finally its general acceptance, in both variolation and vaccination;⁵ although only prophylactic, this was at the time the most significant intervention medicine had made to curtail morbidity and mortality due to infectious disease.

Because vaccination was such an effective protection against disease, it was certainly influential in thinking of medicine in bellicose terms. There is also significant evidence that it was articulated through the martial metaphor.⁶ While the metaphor doesn't play a prominent role in Jenner's 1798 *An Inquiry into the Causes and Effects of the Variolæ Vaccinæ*, for instance, he does refer to smallpox as "that formidable foe to health" in *A Continuation of Facts and Observations Relative to the Variolæ Vaccinæ* (1800). Moreover, as we will see with cholera and other diseases that were figured in the martial metaphor, the discourse of smallpox in the early nineteenth century was closely related to the military and naval medicine of the Napoleonic Wars: vaccination was first institutionalized in a naval reform by Admiral St. Vincent, and the Duke of York ordered compulsory vaccination in all army regiments in 1800. Tim Fulford and Debbie Lee extensively document how Jenner became "a military hero" and his vaccination was metaphorized into a "holy war" in professional medical writing, a war that was both "natural and

⁵ In this context, *variolation* refers to the earliest method of smallpox inoculation, in which material taken from an infected or recently inoculated person would produce a mild version of the illness but leave one immune afterward. The practice was introduced to England in 1721 by Lady Mary Wortley Montagu after her time in Constantinople. She wrote enthusiastically about it, having learned it by watching elderly Turkish women, and later performed it on her son. *Vaccination* denotes the procedure used after 1800 by Edward Jenner, which also involves the introduction of infectious material that was harvested from the less virulent cowpox. Today, *vaccination* refers more broadly to inoculation from any disease, while *variolation* is technically applied only to smallpox. See Stanley A. Plotkin, ed., *History of Vaccine Development* (New York: Springer, 2011).

⁶ For a discussion of vaccination in *The Last Man*, see Fuson Wang, "Romantic Disease Discourse: Disability, Immunity, and Literature," *Nineteenth-Century Contexts* 33, no. 5 (2011). In contrast to Wang, however, the examples I cite and work by Tim Fulford and Debbie Lee suggest that vaccination was not monolithically expressed in the inclusive and "positive" valences of inoculation, but also developed in the language of the war.

political.”⁷ They show how this reception emerged both from vaccination’s connections to the military and from smallpox’s transformation from a disease caused within the body to one that came from the outside in.⁸ All these events and epistemological shifts played a role in the thinking of medicine as war, but when Shelley was writing *The Last Man*, the most proximate was cholera, which brought medicine and the military together in a unique way for England.

Writing and publishing the novel between the first (1817–24) and second (1829–51) cholera pandemics gave Shelley a context for framing her plague in the language and narrative of war. In *The Last Man*, she drew from the response of the British military in India to the 1817 pandemic, and its role in propagating it; the novel then primed the English response to the second pandemic. While England did escaped the first pandemic, the second arrived in in 1831, becoming the first English epidemic.⁹ The liminal period between these outbreaks prompted two contrary positions: on the one hand, that something constitutional about England protected it from disease; on the other, that it was only a matter of time before the “Asiatic” cholera appeared there too. Both positions cultivated the logic of the martial metaphor: either England had “natural defenses” or it needed to mount artificial ones. And in both cases, the novel’s framing of disease as a foreign enemy reflected the way colonial logics and the military were mutually constitutive factors in the kind of thinking that framed cholera as an “invasion.” This helps us understand how

⁷ Tim Fulford and Debbie Lee, “The Jenneration of Disease: Vaccination, Romanticism, and Revolution,” *Studies in Romanticism* 39, no. 1 (2000): 157.

⁸ *Ibid.*

⁹ *Outbreaks* are defined by the sudden occurrence of an infectious disease in a community or area which has either never experienced it or experiences a significantly higher number of cases than in the past. *Epidemic* is generally interchangeable with *outbreak* but is usually used for larger geographic areas. *Pandemics* are epidemics that have spread to multiple countries, and more often, to multiple continents. *Endemic* refers to the ongoing or normal presence of a disease in a given area or population. See Ray M. Merril, *Introduction to Epidemiology* (London: John and Bartlett, 2010), 6.

therapeutic and biopolitical interventions developed out of martial thinking. Furthermore, it reveals the problematic implications of this relationship, such as dividing practices, xenophobia, racial alterity, and the way military action itself is a catalyst of disease.

The period between the pandemics was also significant for the debates over disease etiology: whether it was contagious or infectious via polluted air. Each position carried distinct political implications related to governmental management of diseases affecting the population and to the imaginative construction of Britishness with respect to disease and the rest of the world. Shelley's novel indexes the way the language of war draws from the politics of both camps in framing disease as an enemy, and the graduated transition from pre-nineteenth-century humoral and climatological theories into the miasma-contagion debate.

My central claim in this chapter is that *The Last Man* shows how the martial metaphor emerged in degrees during a time of flux and contradiction. We see this in three capacities: Shelley's engagement with the changes in disease theories, their biopolitical implications, and their relationships to military medicine; her aesthetic and ethical critique of the martial metaphor with respect to the Romantic politics of Percy Shelley and William Godwin; and the dialectical position she takes to both critique the martial metaphor and foster it for extended use in her novel. On the one hand, bringing together these distinct martial and medical threads of her novel raises questions about the way literature funneled the martial metaphor into the public imaginary; on the other, it reveals how reading literature in the context of this medical history can denature the naturalized and occluded ideological function of the martial metaphor,¹⁰ revealing its structure: we can see how it wrought the violent and nationalistic qualities of the military into medicine.

¹⁰ I admit of a bit of poetic license with the term *denature*, which I intend in its primary sense of removing a thing's natural qualities, but also in its use in biochemistry: the process of unfolding a structural order.

Most studies of this novel make reference to the medical history. Critics have addressed the novel's engagement with the early-nineteenth-century debates over etiology, Mary Shelley's personal experience with disease, the colonial anxieties surrounding the 1817 cholera pandemic, and, frequently, the question of Lionel's immunity. The majority of them agree that Shelley represents disease in anticontagionist terms, as miasma, or noxious air linked to filth and decay.¹¹

Another prominent strand of criticism, followed by those investigating the medical-historical context, considers the central question to be whether and to what degree Shelley's novel is a eulogy, criticism, or reformulation of Romanticism—and, in consequence, what outlook on humanity the novel yields.¹² Most relevant here is Fuson Wang's work on immunity and what he calls "Romantic disease discourse." Wang suggests that Shelley's novel reflects the relationship between Romantic literature and medicine, which depended on a porous, affirmative construction of disease and the body, in contrast to the obsession with purity and sanitation evident in much Victorian literature and medicine.¹³

What these studies have not addressed, however, is the novel's central figuration of disease as an enemy in the context of military medicine. I follow Alan Bewell and others in their reading of the way Shelley draws from and contributes to the discourse on cholera early in the

¹¹ Peter Melville, "The Problem of Immunity in the Last Man," *SEL Studies in English Literature 1500-1900* 47, no. 4 (2007); Wang, "Romantic Disease Discourse"; Alan Bewell, *Romanticism and Colonial Disease* (Baltimore: Johns Hopkins University Press, 2003); Fuson Wang, "We Must Live Elsewhere: The Social Construction of Natural Immunity in Mary Shelley's *The Last Man*," *European Romantic Review* 22, no. 2 (2011).

¹² Kari E. Lokke, "The Last Man," in *The Cambridge Companion to Mary Shelley*, ed. Esther Schor (2003), 116–18.

¹³ Wang, "Romantic Disease Discourse," 468–69. See also Wang, "We Must Live Elsewhere."

century.¹⁴ What this chapter contributes to the study of Romanticism and medical history is an account of how Shelley's text reflects on the epidemiological effects of colonialism and its supporting military apparatus, as Bewell suggests, and more pressingly how these medico-military intersections occurred through the imposition of the language of militarism into medical discourse. I develop this by navigating the nebulous conceptual boundaries between contagionism and anticontagionism, and particularly by linking them to pre-nineteenth century medical theories. Furthermore, though I agree with Wang that Shelley makes a case for Romantic medical discourse—an affirmative biopolitics, embracing the other and the abnormal and vaccinated contamination—I show that *The Last Man* gives extended expression to the kind of bellicose thinking that led to the Victorian imperatives of “sanity” and “purity” and their association with the military and war even through the seemingly progressive reforms they underwrote—for instance, the anticontagionist agendas of the mid-Victorian era, which made cholera out to be a disease of “them not us.” Though the novel challenges the idea of medicine as war, it also reflects the metaphor's early traction and shows us the gradated movement from Romantic immunity and affirmative contamination as Wang suggests to Victorian sterility and defense.

Because the novel is so fraught with ambivalence and blurred boundaries, it helps us see the opposing forces at play in the emergence of the martial metaphor and understand how it is both unifying and divisive. Part of the logic of the martial metaphor is a kind of binary thinking, an us-versus-them mentality that depends on the distinction between the normal and the pathological to sustain its defensive boundaries. This follows Donna Haraway's theorization of the immune system as a guide to differentiate self from other: “a plan for meaningful action to construct and maintain the boundaries for what may count as self and other in the crucial realms

¹⁴ Bewell, *Romanticism and Colonial Disease*, 300.

of the normal and the pathological.”¹⁵ Although in the first quarter of the nineteenth century, medicine was not thought of as war in terms of biological immunity as we understand it today—a logic that Arthur Conan Doyle later engages with in his own deployments of the martial metaphor, as I show in chapter 4—disease was already being framed in martial terms even before germ theory and immunology. That which is other than the body and threatening to the body is a “disease agent,”¹⁶ whether contagion, miasma, or bacterium; invades the body just as the enemy does the nation state; and along the lines of Charles Rosenberg’s “contaminationist” model,¹⁷ comes to be understood as an enemy. This facilitates the idea of medicine as war. Disease agents no longer arise from an internal imbalances of the self or the nation, as the humoral understanding would have it, but *The Last Man* shows that the shift to the new model of disease etiology was a complicated one.

The association between disease etiology, self, and the state dovetails into the practices of biopolitics and its function of distinguishing “us” from “them,” which creates opposing sides in the medical war. It wasn’t always a matter of protecting the nation from foreigners and “foreign disease,” a logic that was often deployed with respect to contagionist discourse, as bodies themselves carried disease. Basing the division on the lines of the citizenry became a complicated endeavor with the advent of modern biopolitics. As Foucault suggests, biopolitical governance creates a form of “racism” that not only separates the citizenry from the foreign but divides the

¹⁵ “The Biopolitics of Postmodern Bodies,” 275. See also Esposito, *Immunitas*.

¹⁶ I borrow this term from Martin Willis’s description of the anthropomorphization of microbes. However, I extend it to pre-germ theory etiologies to show the different ways miasma and pre-germ contagion theories gave disease inimical agency before disease became animate. See Willis, *Vision, Science, and Literature*, 15.

¹⁷ Charles E. Rosenberg, *Explaining Epidemics and Other Studies in the History of Medicine* (Cambridge; New York: Cambridge University Press, 1992), 295, 303–4.

citizenry against itself to articulate a kind of internal other, in an internal war.¹⁸ In England, this was evidenced in the way the poor—often associated with disease and crime—were figured as foreigners threatening the middle-class English population. Places were similarly stigmatized: slums and factories were often “tropicalized,” portrayed as producing a miasmatic environment more “natural” to the tropics. India, for instance, served as the analogue of the urban space.¹⁹ In this way, imperialism was essential to shaping Englishness by defining it not only against other countries and territories, but against elements within itself. In Ann McLintock’s words, “Imperialism is not something that happened elsewhere. . . . Rather, imperialism and the invention of race were fundamental aspects of Western, industrial modernity . . . the invention of race in the urban metropolis . . . became central not only to the self-definition of the middle class but also the policing of the ‘dangerous classes.’”²⁰ By the 1830s, cholera was viewed in England as a disease of poverty through the miasmatic paradigm; and while anticontagionists were often associated with progressive and democratic politics,²¹ colonial and racial discourse were frequently used to characterize the poor and “dangerous” populations that were seemingly the most susceptible to the disease, often through the conflation of hygiene and heredity. Here lies one of the material linkage between colonialism and biopolitics, between war and public health.

¹⁸ *Society*, 65, 216, 56.

¹⁹ Bewell, *Romanticism and Colonial Disease*, 274–75; Gilbert, *Mapping the Victorian Social Body*, 146–47.

²⁰ *Imperial Leather: Race, Gender, and Sexuality in the Colonial Conquest* (New York: Routledge, 1995; repr., 2014), 5.

²¹ See Ackerknecht, “Anticontagionism”; Sylvia Noble Tesh, *Hidden Arguments: Political Ideology and Disease Prevention Policy* (New Brunswick, NJ: Rutgers University Press, 1988); Anne McWhir, “Mary Shelley’s Anti-Contagionism: The Last Man as ‘Fatal Narrative,’” *Mosaic* 35, no. 2 (2002).

Through the narrative of an apocalyptic pandemic, Shelley defamiliarizes this process, bringing to light its enactment through medical discourse.

This chapter begins with Shelley's reflection on the 1817 cholera epidemic and Britain's military presence in India during its initial outbreak, which helps us understand how her novel contributed to the imaginative construction of the 1832 cholera epidemic in England that followed its publication. *The Last Man*'s representation of the contagion theory of disease shows how medical practitioners in the British military and writing about it began thinking of disease as an enemy army. Shelley follows some contemporary commentators in attributing the initial cholera outbreak, in contagionist terms, to the movement of British troops. She links military actions, especially those involved in colonial infrastructures, to the propagation not just of the metaphor but of the disease itself. In the next section, I discuss how the miasmatic representation of disease originated in pre-nineteenth-century humoral theories that constituted the East in a colonial logic that pathologized the land itself. Shelley shows us how the imbalances of the humoral theory morph into miasma as an inimical agent, which helps us understand the role of miasma as a product of the foreign deployed to England's own internalized xenophobic, racial, and classist practices, which puts into question the "productive" and reformatory biopolitical imperatives of the anticontagionist movement. In this context, *The Last Man* reconfigures the imperial order that posited England's superiority. In the final section, I develop the implications of the novel's representation of miasma, by showing how the aesthetics of the sublime represents contradictory ways of responding to disease as an inimical natural force. Shelley deploys the sublime to explode the biopolitical calculus of human suffering, and thus reveals her resistance to the belief in inherent human progress held by both her husband and her father. Shelley is not completely pessimistic, however; in characterizing the encounter of Lionel's immunity with the

“negro half clad,” she presents an ethical imperative to form empathetic bonds with the other in an effort to live with rather than against disease.

Reading *The Last Man* through this critical trajectory puts into question the relationship between literature, medicine, and the martial metaphor. In voicing her critique of medicine as war, Shelley provides an accessible language that works as a narrative anodyne to the existential crises of infectious disease, and more broadly, mortality; she makes disease comprehensible in terms of war through her extended representation. At the same time, however, by contextualizing this logic in the medical politics and military history of the time, she denatures the martial metaphor and reveals its ideological, cultural, and material structure and components, unfolding it as a metaphor that has been naturalized.

Cholera, Contagionism, and Military Medicine

Although the focus of this chapter is the early nineteenth century, the martial metaphor does make a number of appearances in the late eighteenth century, most of them in the context of military medicine in colonial, tropical environments. Although some political and literary writers expressed concern over disease “attacking” British troops—including Romantics such as Coleridge and Burke²²—it was mainly military surgeons and people writing about colonial disease for military and colonial purposes who deployed the metaphor before the nineteenth century. What is significant about these early iterations is that they point to the grounding of the figurative martial metaphor in the material intersection of medicine and the military, which is one of the central claims of this dissertation. The focus of military medicine was controlling infectious disease in colonial geographies. And while traditional “tropical diseases” like malaria

²² Bewell, *Romanticism and Colonial Disease*, 20–22.

were certainly a concern, as I show in the chapter on Conrad, it was cholera that really mobilized colonial military medicine and prompted its sublimation into a metaphor to be adopted by medical practitioners, politicians, and writers in Britain in the first half of the nineteenth century. The cholera epidemics of 1817 and 1832 were crucial to the adoption of the metaphor, not only because of these links to the military but because theorizations of the disease's causality formed an epistemological framework for understanding disease agents as enemies. *The Last Man*, published between these epidemics, reflects these debates as they relate to framing medicine as war.

The 1817 epidemic challenged older medical concepts and provoked tensions in the imaginative constructions. The disease was at once new and old: "cholera" did not denote the *vibrio cholera* bacterium until 1882.²³ The term comes from humoral medicine and refers to *cholera*, or yellow bile, one of the four humors. Before the nineteenth century, when Europeans spoke of cholera they were generally referring to gastroenteritis—basically, any irritation of the GI tract—with vomiting or diarrhea.²⁴ But as news of it spread early in the century, the "Asiatic cholera" or "blue cholera" of 1817 seemed a completely different beast from the cholera endemic to England, known as *cholera morbus*. The matter was debated widely. Some suggested that the new disease was a different one, but others thought it was simply a more potent strain due its "birth" in the tropics. As early as 1831, historians of cholera commented on the public perception of the disease, noting that the 1817 epidemic had not initially caused much concern. The authors of a widely circulated²⁵ 1831 *Lancet* article suggested that, "misled thus by the identity of a name

²³ Hamlin, *Cholera*, 33–35, 240.

²⁴ *Ibid.*, 163.

²⁵ Gilbert, *Mapping the Victorian Social Body*, 142.

of hurried and almost popular imposition, the cholera of India was confusedly deemed identical with the disease of that title familiar to the English practitioner; and, arguing from the rare mortality, and the evidently non-contagious nature of the latter, the public erroneously flattered themselves with the notion, that the Indian pestilence had received exaggerated attributes.”²⁶ Moreover, they noted that much of the public felt secure “that it would doubtless remain within the cradle of its birth, and never manifest the power of extending its virulence to other climates.”²⁷ Shelley reproduces and debunks this fantasy in *The Last Man*, whose protagonist suggests that the plague rumored to be spreading in the East is a “nursling of the tropics” and will “expire in British climes” (*LM*, 186). I discuss this in the section on climatological and humoral theories of disease.

The second cholera pandemic, which “invaded” England, fostered the language of war against epidemic disease in the popular imaginary, as both *The Last Man* and second epidemic itself drew attention to the fragility of England’s “natural” defenses against disease. This theme persisted in the relationship between medicine and war through the nineteenth century, as I show in the chapters on Stoker and Doyle in Part II of this dissertation.

The nature of cholera made it a shaping force in the emergence of the martial metaphor. Its “violent” symptoms—uncontrollable fecal expulsions to the point of death by dehydration or hyponatremia²⁸—and its rapid progress—usually 24 to 48 hours, but sometimes as few as 18—

²⁶ “History of the Rise, Progress, Ravages, &C of the Blue Cholera of India,” *The Lancet* 1 (1831): 241.

²⁷ *Ibid.*

²⁸ Hyponatremia is defined by a low concentration of sodium caused by the loss of the mineral through the bowels. This depletion results in a dysfunction in nerve conduction, which ultimately affects the heart’s ability to contract.

contributed to its being characterized as an “attack.”²⁹ To call this the sole or even the central cause of cholera’s significance to the martial metaphor, however, would be to oversimplify the metaphor’s history and contribute to its naturalization. A number of factors beyond symptomology were involved in making the disease inimical.

Questions about the disease’s origins were intimately tied to the focus of the medical gaze. While the 1817 cholera did not reach Europe, it changed the way medical professionals in England thought about the disease. Spreading from India to East Asia, Egypt, Japan, and the Middle East, the 1817–24 pandemic was the first major outbreak of the nineteenth century to spread to multiple continents, sweeping across them with a virulence that medical professionals compared to that of the bubonic plagues of the Middle Ages and the mid-seventeenth century.³⁰ It died down in 1823–24 without spreading west of Caspian Sea, but as Hamlin suggests, from 1817 onward the virulence of the “new cholera” strongly encouraged research into the pathological process behind it. At the time, this did not yield a precise understanding of the disease’s pathophysiology,³¹ although one of its key symptoms, the sloughed white matter in the “rice water” stool, was noted in the intestines in a number of autopsy reports,³² alongside other tissue damage to the GI tract. This kind of epistemic imperative is linked to the development of the

²⁹ There are countless examples, but the most relevant may be James Jameson, *Report on the Epidemick Cholera Morbus: As It Visited the Territories Subject to the Presidency of Bengal, in the Years 1817, 1818 and 1819* (Calcutta: Government Gazette Press, 1820). See also S. L. Kotar and J. E. Gessler, *Cholera: A Worldwide History* (Jefferson: Macfarland, 2014), 8. The disease’s “violence” can be understood in contrast to something like tuberculosis, which (not including the incubation period, but only from the point of showing symptoms) can take years.

³⁰ Hamlin, *Cholera*, 34. Some sources estimate between 1 and 1.5 million deaths. See Michael C. LeMay, *Global Pandemic Threats: A Reference Handbook* (Santa Baraara: ABC-CLIO, 2016), 328.

³¹ *Cholera*, 20–21.

³² This matter would later be identified as fragments of the large intestines.

medical gaze, in the first decades of the nineteenth century but especially during the 1830 epidemic, as a key discourse in the development of the martial metaphor. The observable presence of lesions led to the framing of disease as an agent: that is, whether contagious toxin, miasma, or germ; there was something that damaged that tissue, and that something was other than the body.

What this reflects is a movement away from the symptoms the patient felt or spoke of and toward the symptoms the doctor could see. Like a general in battle, only the doctor had the big picture. Disease agents solidified the martial metaphor by giving medicine an opponent to fight, in contrast to the conglomerations of symptoms, disease types, and humoral imbalances of pre-nineteenth-century medicine. That discourse was still common early in the century, but when cholera hit England in the 1830s, miasma theory overtook it in popularity. Although cholera was an old concept already, it was only then that it took a central place in the debates over disease etiology. These discussions had also never been as contentious as they grew during the nineteenth century, as the subject gathered polarizing political meaning.³³

The three major etiological proposals in circulation in the nineteenth century were contagionism, anticontagionism, and germ theory, but the last didn't emerge until late in the century, so the dispute between contagionism and anticontagionism is most relevant to Shelley. Contagionism posited that disease was transmitted by bodies, and in this way metonymically made the person a disease agent. It was associated with conservative ideologies that proposed quarantines as public health measures on the model of the *cordon sanitaire* practice from the Middle Ages. Sanitarians—anticontagionists—considered this practice outdated and illiberal, as it involved the closure of trade routes and the restriction of personal liberty. Anticontagionism,

³³ Tesh, *Hidden Arguments: Political Ideology and Disease Prevention Policy*, 11.

which was generally equated with miasma theory, pointed instead to the environment,³⁴ specifically the air, as the transmitter of disease. Pestilent vapors generated in foul environmental conditions, such as filth, decay, and excrement, spread through the air and grew more or less infectious according to air quality, wind, and other factors—often including the individual’s constitution.

Before the 1831 epidemic, medical practitioners in England were mainly contagionists.³⁵ The epidemiological maps that Anglo-Indian medics developed in the 1820s and 1830s tended to support the contagionist model,³⁶ even as the tide started turning in favor of anticontagionism in the late 1820s.³⁷ Many practitioners in England were able to link the 1817 cholera epidemic to contagion, and military medical practitioners in India were much more inclined to contagionism.³⁸ One contagionist publication stands out, the 1831 *Lancet* article mentioned above: “History of the Rise, Progress, Ravages, &C of the Blue Cholera of India.” This article maps the progress of the disease and articulates how British military movements, alongside other displacements of populations, spread the disease. It is relevant to Shelley for leading the way to her reflections on how the empire, through the military, medically affected the parts of the world

³⁴ There were a number of different contested positions under the broader rubric of anticontagionism, as Hamlin and Ackerknecht have outlined.

³⁵ Ackerknecht, “Anticontagionism,” 13. A notable exception is James Jameson. See his *Report on the Epidemick Cholera Morbus*, ch. VI.

³⁶ Gilbert, *Mapping the Victorian Social Body*, 142.

³⁷ Ackerknecht marks the “turning of the tide” in 1831–32, when a number of previously strict contagionists dropped notable contagionist positions in favor of contingent contagionism or anticontagionism. “Anticontagionism,” 12.

³⁸ Gilbert, *Mapping the Victorian Social Body*, 148.

it inhabited, drawing connections between martial formulations in medical writing in the wake of war.

Although we now categorize anticontagionism and contagionism as two rival historical disease theories, it is important to realize that the distinction was not so clearly defined at the time, as Margret Pelling, among others, has argued.³⁹ Likewise, medics' beliefs from that time cannot be easily fitted into this binary, which was in large part devised in response to political pressure to take a clear stand on social and economic consequences, especially regarding trade and quarantines.⁴⁰ While most critics follow McWhir's contention that Shelley's anticontagionism informed the miasmatic character of the plague in *The Last Man*,⁴¹ her use of contagionism as well reflects the blurriness between the theories in her time and the different politics they imbued into the martial metaphor.

Contextualizing the novel within the history of contagionism, military medicine, and the 1817 cholera epidemic helps us understand how it accounts for the epidemiological consequences of military and colonial activities. Contagionism had come to be intimately linked to military medicine through the military-enforced quarantine, in which armed force was used to contain infectious bodies in defense of national boundaries or troops. But the 1817 epidemic transmuted military medicine into the martial metaphor. Medicine and the military were linked both by the military's defense against cholera and by its participation in spreading the disease. Cholera became a prominent concern both of physicians in the East India Company Army and of British

³⁹ Margaret Pelling, "The Meaning of Contagion," in *Contagion: Historical and Cultural Studies*, eds. Alison Bashford and Claire Hooker (London: Routledge, 2001), 21. See also her earlier discussion in *Cholera, Fever and English Medicine, 1825-1865* (Oxford [England]; New York: Oxford University Press, 1978); See also Gilbert, *Cholera and Nation*.

⁴⁰ Gilbert, *Mapping the Victorian Social Body*, 209, n15.

⁴¹ McWhir, "Mary Shelley's Anti-Contagionism," 23.

“regulars” who supported the company’s rule.⁴² While the job of military physicians and surgeons was certainly to provide aid during military operations, the health of the soldiers in the barracks was their primary concern: disease casualties were the main cause of inefficiency.⁴³ By killing soldiers and inhibiting troop movement, cholera easily came to be thought of as an enemy to the military.

Cholera’s relationship with the British military in India was not unidirectional, however: the military itself affected the course of the epidemic. As a number of scholars and medical commentators noted at the time,⁴⁴ British soldiers were a primary vector in the spread of cholera across India. With respect to martial metaphor, then, medicine is war not only because disease is an enemy, but also because war always includes and frequently amplifies disease. *The Last Man* draws attention to the way military operations support for colonialism reconfigured the ecology of disease. Bewell’s contends, in this vein, that the most influential context of the novel was the imperial military one: the British military facilitating the spread of cholera in India.⁴⁵ The link between the disease and troop movement is not only key to understanding the epidemiology of

⁴² The company’s army was made up mostly of European officers and troops, with some Indian regiments. The British military, however, played a central role in this force, and from the mid-eighteenth century onward regularly deployed regiments to support the standing army, commanded by the Marquis Hastings. Thus, the vast majority of military officers were British, although there were Indian soldiers in the army. The Company army was not officially absorbed into the British military until 1860, after the 1857 Indian Mutiny

⁴³ David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press, 1993), 64.

⁴⁴ Hamlin, *Cholera*, 162; Arnold, *Colonizing the Body*. For medical professionals who attributed the spread of the disease to military movement, see “History of the Rise, Progress, Ravages, &C of the Blue Cholera of India.”

⁴⁵ Bewell, *Romanticism and Colonial Disease*, 298–301.

cholera in India; it also reveals how armies helped the local cholera epidemic become a global pandemic.⁴⁶

The intersection between defense and propagation is evident in the way medical practitioners described cholera. In both military and civilian medical writings, the 1817 cholera was often referred to as if it were an army, in both nominal and predicate capacities. In tracing the disease's path across India, especially through British military camps, surgeons and physicians often described it as "marching." The authors of the *Lancet* article, for instance, make numerous references to cholera's martial traverses: "We have now followed this disease in its marchings and countermarchings in every direction of the compass."⁴⁷ And this leads them to conclude that the movement of contagion, rather than air, is the cause: "We associate this explanation with the indisputable fact that the rapidity of the march of cholera from place to place, is exactly augmented in the ratio of the increase in celerity of intercommunication, of places." The authors follow the logic of *contingent* contagionism here, a qualified contagion theory which posited that noxious exhalations or emanations arising from the body could be transferred from person to person in the right circumstances.⁴⁸ Although they lay the blame on "the coincidence between the irruption, of the disease in previously uninfected places, with the arrival of ships, of caravans of fugitives or pilgrims individuals, and with the progress of armies," they do put significant emphasis on the close relationship between the movement of soldiers and the disease.⁴⁹

⁴⁶ *Ibid.*, 246.

⁴⁷ "History of the Rise of Cholera," 214.

⁴⁸ *Ibid.*, 276.

⁴⁹ Bewell, *Romanticism and Colonial Disease*, 246.

One effect of the martial metaphor here—in the rhetoric of cholera *attacking* and *marching* as a military force—is that it obscures the role the military actually plays in the propagation of the disease by naturalizing the connection between medicine and war. That is, the metaphorical march of the disease displaces the actual march of the army and its role in circulating cholera. Trade and other movements of population are certainly relevant, as they go hand in hand with colonial development and also appear in *The Last Man*, but I want to highlight the role the military plays specifically, as it is important to the point of origin of Shelley’s fictional plague.

Shelley’s disease etiology follows miasmatic logic but also hints at a contagionist contingency. Much as the British military spread cholera from India around the globe, an attack on Constantinople by the novel’s Byron-inspired military adventurer.⁵⁰ Lord Raymond Raymond literally opens the door to the besieged and plague-ridden city. Even before describing Raymond’s campaign, however, Shelley critiques the ideology behind his desire to go to war. By attending to his motives this way, Shelley challenges Britain’s exceptionalism, untamed pride, and imperial drive and links the novel’s central antagonist, the plague, to war.

Raymond’s governance of England and his colonial militarism, impulsive nature, and association with the exotic Turkish princess Evadne are closely tied the plague’s outbreak. Raymond begins governing in place of the heir, Adrian—a plain analog of Shelley’s husband Percy—who has abdicated. But before the major turning point in the novel, when the plague makes its appearance in Constantinople, Raymond has lost interest in governing England and decided to fight in the war of Greek independence. And in addition to his association with British colonial militarism, he confesses with pride his Napoleonic imperial drives, early in the novel:

⁵⁰ Hilary Strang, “Common Life, Animal Life, Equality: The Last Man,” *ELH* 78, no. 2 (2011): 416.

“My first act when I become King of England, will be to unite with the Greeks, take Constantinople, and subdue all Asia. I intend to be a warrior, a conqueror; Napoleon’s name shall vail to mine; and enthusiasts, instead of visiting his rocky grave, and exalting the merits of the fallen, shall adore my majesty, and magnify my illustrious achievements” (*LM*, 44). This alludes to the significance of disease to military efforts during the Napoleonic Wars, such as the role typhus played in halting Napoleon’s advance into Russia. Like Napoleon in Antoine-Jean Gros’s *Napoleon Visiting the Pesthouse at Jaffa* (1804), Raymond sees the threat of plague as a “base superstition”:⁵¹ it is normal, he says, for the “plague [to] rage each year in Stamboul” (*LM*, 154)—again naturalizing the East as a pathological geography.

Raymond’s Napoleonic tendencies lead to the failure of his rule in England, which is a comment on British politics and colonialism of the time. When Raymond abdicates his role as lord protector to fight in Greece, he asks Lionel to join him and “witness the mighty struggle there going forward between civilization and barbarism; behold and perhaps direct the efforts of a young and various population for liberty and order” (*LM*, 121–22). Raymond’s call to arms expresses not only the colonial logic of advancing civilization against barbarism, but the interest in deploying governance on foreign populations and acquiring land and resources. This kind of thinking—the othering of foreign bodies, characterizing them in inferior racial positions, in this case barbarism—eventually leads to turning the same biopolitical logic inward, as I discuss at greater length in the following section on anticontagionism.

⁵¹ Bewell, *Romanticism and Colonial Disease*, 300. *Napoleon Visiting the Pesthouse at Jaffa*, a painting by Antoine-Jean Gros, was commissioned by Napoleon and depicts the commander visiting his sick soldiers in what is now modern day Israel. See Y. Hibbott, “‘Bonaparte Visiting the Plague-Stricken at Jaffa’ by Antoine Jean Gros (1771–1835),” *British Medical Journal* 1, no. 5642 (1969): 501.

Shelley associates Raymond's imperial purpose with a kind of disordered self-interest, as he shows himself to be "gallant and imperial" (*LM*, 143) when he takes command of the Greek army. But Raymond has already started losing interest in governing and improving the populace, taking recourse instead to parties and drink. In an incisively ironic statement that highlights Britain's own history in the slave trade, he complains that his service to society inhibits his personal desires: "Because I am Protector of England, am I to be the only slave in its empire?" Raymond's inability to control himself, and his impulsive egoism that projects this inability outward, are analogous to the imperial conquest's origin in the failure of England's domestic politics.⁵² This is certainly a broad critique of Britain's imperialism, but it also speaks to the material circumstances of the martial metaphor's emergence.

The links between medicine and war in this scene highlight the way these practices displace resources from a nation's population and can ultimately lead to public health consequences internally. Raymond withdraws from public service and joins a foreign war out of an interest in personal glory, the imperial imperative of "civilizing" foreign others, and an infatuation with Evadne, who is often read as an oriental seductive temptress.⁵³ Shelley associates Raymond's impulsive actions with this love affair: when Evadne dies during the Greek war, she curses him and foretells the connection between the plague and the war: "Fire, and war, and plague, unite for thy destruction" (*LM*, 145). Soon afterward, Raymond lays siege to Constantinople only to find that it was not military force but plague that defeated the Turks, who

⁵² Bewell, *Romanticism and Colonial Disease*, 301. Gerard Cohen-Vrignaud reads this in terms of liberalism and orientalism, where the pleasures of the East deactivate his drive for self-determination and autonomous subjectivity. *Radical Orientalism: Rights, Reform, and Romanticism* (Cambridge: Cambridge University Press, 2015), 167.

⁵³ In contrast, Wang reads her as a source of inoculation and one way Shelley challenges racial and gender binaries. See Wang, "We Must Live Elsewhere," 240.

flee the city, exclaiming, “Take [the city], Christian Dogs—take the plague with [it]; pestilence is the enemy we fly; if she be your friend, hug her to your bosom” (*LM*, 152). As a result, the Greeks army fears “fighting” the disease; they “dare not go against the Plague” (*LM*, 153). While it seems cathartic and humanizing to have the men realize that the true threat is not an army but a disease, this kind of thinking reproduces the problem with representing the martial metaphor in literature—it occludes the conditions that foster its emergence, namely the military encounter with disease. Rather than prompting consideration of the implications of this intersection, the realization of disease as “the true enemy” naturalizes the construction. This scene emblemizes the very process through which literature transfigures medicine *in* war to medicine *as* war.

Raymond’s egoism and Byronic militarism leave him the sole bearer of the Greek flag, seeking to conquer the city himself. But he is killed when the buildings collapse and a vaguely defined city-wide fire erupts along with a “turbid cloud,” fulfilling Evadne’s prophecy of fire, war, and plague.⁵⁴ The miasmatic connections between the dark cloud and pestilence are obvious; I want to draw attention to the aftermath. Back in England, Adrian, Lionel, and Ryland, Raymond’s successor as protector of London, hear that the plague that led to the Greek victory has spread:

It seems that the total destruction of Constantinople, and the supposition that winter had purified the air of the fallen city, gave the Greeks courage to visit its site, and begin to rebuild it. But they tell us that the curse of God is on the place, for every one who has ventured within the walls has been tainted by the plague; that this disease has spread in Thrace and Macedonia; and now, fearing the virulence of infection during the coming

⁵⁴ Biographically, we can read Raymond’s militarism in terms of the circumstances of the death of Lord Byron, as Raymond clearly reflects the Romantic ideals, affects, and “titanism” suggestive of Byron. Byron joined the Greek War of Independence, fighting for the Ottoman Empire against the Greek Revolutionaries, but died of a fever in Missolonghi in 1824. See Lokke, “The Last Man,” 120. Notably, this was another of the many deaths Mary Shelley experienced around the time she was writing *The Last Man*; it is further distinct in its material connection to war, a link Shelley echoes in Lord Raymond’s death. But Shelley’s critique of the biological consequences of war go beyond individual bodies—beyond, biographically, the loss of Byron.

heats, a cordon has been drawn on the frontiers of Thessaly, and a strict quarantine exacted. (*LM*,176)

The scene follows the logic of contingent contagionism, according to which pathogenic exhalations can be transmitted from person to person. The Greeks enter the ruined city to rebuild it as Greek territory: they had earlier discussed “in lofty terms the prosperity of Greece, when Constantinople should become its capital” (*LM*, 148). Even after they think the city is safe, however, everyone who enters becomes sick. It is no coincidence that the disease is spread across the Greek territories: it is carried by people who entered the city and carried the effluvia out with them. Furthermore, the Greeks do think it is contagious, which is why they enact a cordon: they don’t have the knowledge Lionel later recounts, that “the plague was not what is commonly called contagious, like the scarlet fever, or extinct small-pox” (*LM*, 185). That is, they believe in a strict contagionism that doesn’t allow for transmission by effluvia.

The westward advance of the epidemic can thus be read as an invasion from the East. The narration of Raymond’s siege, a military attack, an attempted colonialization, and the passage of bodies in and out of the city highlight Shelley’s condemnation of the military and colonial practices that enabled the movement of the 1817 cholera.

The effluvious contingency reappears in the martial language of invasion when Lionel recounts his meeting with the “negro half clad,” the occasion of his own infection: “. . . writhing under the agony of disease, while he held me with a convulsive grasp. With mixed horror and impatience I strove to disengage myself, and fell on the sufferer; he wound his naked festering arms round me, his face was close to mine, and his breath, death-laden, entered my vitals” (*LM*, 268). This notorious scene is often read as both Lionel’s infection and his inoculation: he takes ill soon after but does not die, and appears to be immune.⁵⁵ The “festering” limbs and “death-laden”

⁵⁵ The source of Lionel’s actual infection and immunity are contested. See Melville, “The Problem of Immunity”; Wang, “We Must Live Elsewhere”; and Wang, “Romantic Disease

breath evoke the different iterations of contingent contagionism, of effluvia as arising from breath or from body. But even as the disease takes the form of a miasma, as an air that “enters [his] vitals,” its invasive quality bespeaks its status as a penetrative disease agent, an inimical force; moreover, it arises from one racialized body and enters another. With this blurriness between contagionism and anticontagionism—the proximate cause is a disease body, but the ultimate cause is pathogenic air—Shelley reflects the moment of transition between two disease theories but also the way they both draw on xenophobic ideologies to make disease inimical.

Understanding how Shelley addresses contagionism and its passage into anticontagionism puts us a better position to see how the generally accepted miasmatic etiology of her plague speaks to the martial metaphor. By the end of the novel, however, Lionel’s complete embrace of racial otherness, together with the immunity he develops,⁵⁶ affirms the positive possibility of embracing the other, of engaging with sympathy rather than through the narrative of defense. In this scene, Shelley challenges both the contagionist politics that quarantined foreign bodies and the anticontagionist sanitary imperatives that associated poor and foreign individuals with colonial filth. Lionel’s brief illness, recovery, and immunity, counter the assumption that defense and purity are the best medicines, calling into question the logic of the martial metaphor.

Along with effluvia and contingent contagionism, Shelley links miasma, in the general sense of oppressive air and unhygienic circumstances, to the material consequences of war. The primal scene in Constantinople shows how miasma, the oppression of the weather, and the conditions of battle can have a comorbid synergistic effect. While Raymond and the Greek army

Discourse: Disability, Immunity, and Literature.”

⁵⁶ Bewell, *Romanticism and Colonial Disease*, 313; Wang, “We Must Live Elsewhere,” 242; and Peter Melville, *Romantic Hospitality and the Resistance to Accommodation* (Waterloo, ON: Wilfrid Laurier University Press, 2007), 169.

hold the siege, the fire of weaponry is conflated with the noxious air and heat that produce the conditions for miasma to fester:

Each day the soldiers of the garrison assaulted our advanced posts, and impeded the accomplishment of our works. Fire-boats were launched from the various ports, while our troops sometimes recoiled from the devoted courage of men who did not seek to live, but to sell their lives dearly. These contests were aggravated by the season: they took place during summer, when the southern Asiatic wind came laden with intolerable heat, when the streams were dried up in their shallow beds. . . . In vain did the eye strive to find the wreck of some northern cloud in the stainless empyrean, which might bring hope of change and moisture to the oppressive and windless atmosphere. All was serene, burning, annihilating. We the besiegers were in the comparison little affected by these evils. . . . The sun's rays were refracted from the pavement and buildings—the stoppage of the public fountains—the bad quality of the food, and scarcity even of that, produced a state of suffering, which was aggravated by the scourge of disease; while the garrison arrogated every superfluity to themselves, adding by waste and riot to the necessary evils of the time. (*LM*, 151)

Hoping for an element of Britain's weather to counter the threat, the soldiers "strive to find the wreck of some northern cloud." What is important to note here is that although the miasmatic plague was already present in Constantinople, the siege has concentrated and exacerbated it. The drainage problems, low quality and quantity of food, poor ventilation due to the siege, and heavy work combine with the miasma from the east and are exacerbated by the hot weather, which in anticontagionist theory increases disease's virulence. And while this scene frames the material relationship between battle and disease, it also signals the social construction of disease's association with foreigners. The original disease agent is traced to the "Asiatic wind" in contrast to the "northern cloud," an allusion to climatological disease theories as they figured in colonialism, a topic I address in a later section.

Lionel's dream of a miasmatic phantom figure helps us understand how in war, even war on disease, everybody loses. After the city collapses upon Raymond's entry, Lionel has a dream that portends the coming plague through a miasmatic figuration of Raymond's military campaign:

Methought I had been invited to Timon's last feast; I came with keen appetite, the covers were removed, the hot water sent up its unsatisfying steams, while I fled before the anger of the host, who assumed the form of Raymond; while to my diseased fancy, the vessels

hurled by him after me, were surcharged with fetid vapour, and my friend's shape, altered by a thousand distortions, expanded into a gigantic phantom, bearing on its brow the sign of pestilence. The growing shadow rose and rose, filling, and then seeming to endeavour to burst beyond, the adamantine vault that bent over, sustaining and enclosing the world. The night-mare became torture. (*LM*, 161)

The threat of mutually-assured infection is clarified by an iconic illustration of cholera from 1829, at the beginning of the second pandemic. Raymond's taking on the figure of Pestilence alludes to an image of the grim reaper that recurs in written and visual depictions of miasma in figures such as "King Cholera," who is often pictured hovering in an ether of pestilential air. The image of Raymond as a phantom resonates most vividly with Robert Seymour's *Cholera Tramples the Victors and the Vanquished*, which depicts the disease attacking both sides of the Polish insurrection at Warsaw early in the 1831 cholera pandemic.⁵⁷ The smoke from the cannons and rifles merges with the cholera, much as Raymond's siege fostered the pestilence in Constantinople. Shelley deploys almost exactly the wording of this title later, when Lionel recounts the meeting between the makeshift English army and the foreign invaders, reminding the reader that "plague still hovered to equalize the conqueror and the conquered" (*LM*, 238). The resonance of the Warsaw image with the language of bilateral destruction falls in line with Shelley's critique of the epidemiological effects of war. As I will show, Shelley presents this apocalyptic connotation through the sublime and links it with pre-nineteenth-century disease theories.

⁵⁷ The original illustration contains the victor-vanquished caption. See Robert Seymore, "Cholera Tramples Both Victors and the Vanquished," *Mclean's Monthly Sheet of Caricatures*, London, October 1, 1831.

The Climatological and Humoral Genealogy of Miasma as Invasion

We have seen how both contagion and miasma theory are associated with the martial metaphor with respect to the material practices of war. Although the physical containment of bodies by the military cordon contributed to the logic of medicine as war by giving it a material manifestation, the conceptual ontology behind anticontagionism's theory of miasma had a significant influence on the emergence of the martial metaphor. Contagionism, in some of its pre-nineteenth-century iterations, still operated on the logic of balance and the curative power of nature under humorism (or humoralism).⁵⁸ But after the first quarter of the nineteenth century, anticontagionism's miasma theory posited disease as an entity from without, as something external that invaded the interior of the body. Understanding miasma's status as a disease agent helps us see how anticontagionist politics were entwined with colonial and nationalist logics. Shelley problematizes the division between contagion and miasma, showing how anticontagionism too was influenced by humoral and climatological understandings of disease. This linkage shows the gradual nature of the shift from metaphors of balance to metaphors of war and draws out some of the origins of the racial alterity that was imbricated in anticontagionism. Shelley's use of anticontagionism adds to her works in tandem with contagionism; it shows not only the biological consequences of militarism and the military metaphor, but the political and economic effects, revealing contradictory ideological positions in England's identity with respect to the rest of the world.

Considering the novel's representation of disease as foreign help us think about the internal regulatory biopolitics associated with anticontagionism. Broadly speaking,

⁵⁸ See, for instance, Jon Ewing, "An Inaugural Dissertation on the Effects of Contagion Upon the Human Body" (University of Pennsylvania, 1794), 11; and Cohen, *A Body Worth Defending*.

anticontagionists were characterized as politically progressive. In most iterations of the theory, the pathogenicity of air was a result of filth and thus linked to poverty.⁵⁹ This led the sanitary movement to make its primary target the specifically urban environment and the lives and routines of the people who lived there, in an effort to clean up the poor through hygienic measures and government intervention.

Medical historians usually describe anticontagionism as having become “official” in 1848 with the passing of the Public Health Act, in which the government endorsed anticontagionist intervention.⁶⁰ For anticontagionists, the idea of filth and airborne infection compelled not just an inquiry into how disease might spread or be contained, but into the extent of the obligation disease imposed on society to care for its weaker members.⁶¹ In reference to this obligation to include, Melville addresses the way hospitality operates in *The Last Man*, especially for foreigners seeking refuge from the plague in England, which becomes a *hospital* in both the medical and hospitality senses of the word.⁶² Ryland, who ultimately renounces his own responsibilities as lord protector out of fear of the plague, explicitly refuses this “hospitalizing”

⁵⁹ It is worth noting Mary Douglas’s influential study of filth, where she defines filth as “matter which is out of place.” *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (London and New York: Routledge, 1966; repr., 2015), 36. This falls along the lines of the self-other distinction, and, consequently, defense.

⁶⁰ Ackerknecht, “Anticontagionism,” 13. While government intervention in the form of guardians and nuisance acts might seem contrary to liberalism, in terms of its emphasis on individualism, the sanitary movement had personal liberty as a central tenet. As we see in Kingsley, miasma theory’s emphasis on hygiene and self-sufficiency was added to governmental measures in order to foster the best conditions for industrial production. In a utilitarian calculus, sanitarians contended that money spent on cleaning up the urban environment would lower the amount spent by government in other realms, such as poverty relief, premature death of laborers, and parochial relief for children. See Tesh, *Hidden Arguments: Political Ideology and Disease Prevention Policy*, 30–31.

⁶¹ Melville, *Romantic Hospitality*, 156.

⁶² *Ibid.*, 162.

England: “I neither pretend to protect nor govern [sic] an hospital—such will England quickly become” (*LM*, 194–95). Adrian stands in contrast to this when he challenges Ryland’s renunciation of his duties, invoking the martial metaphor himself when he becomes lord protector in turn: “It is not by flying, but by facing the enemy, that we can conquer. If my last combat is now about to be fought, and I am to be worsted—so let it be!” (*LM*, 195).⁶³ Whether to welcome the diseased citizens of that “other nation” within England, as Benjamin Disraeli might characterize the diseased poor, is a question of how the ideas of *hospital* and *hospitality* are to operate within the politics of anticontagionism. While this progressive, reformative impulse of hospitality and embracing seems very distant from martial logics, over the course of the novel the notion of England as hospital is associated with militarism and violence.

Part of what made miasma comprehensible as an enemy was the difficulty of containing it. Although I have addressed the possible exception to the plague’s strict (non-contingent) airborne transmissibility, Lionel himself suggests that the disease’s “chief force” was “derived from the pernicious qualities of the air” (*LM*, 196). However, one conceptual difference between miasma and contagious bodies is the possibility of containment. Lionel puts it this way: “If infection depended upon the air, the air was subject to infection. As for instance, a typhus fever has been brought by ships to one sea-port town; yet the very people who brought it there, were incapable of communicating it in a town more fortunately situated. But how are we to judge of airs, and pronounce—in such a city plague will die unproductive; in such another, nature has provided for it a plentiful harvest” (*LM*, 185). A state can contain contagious bodies with a cordon, but how can it build walls against noxious air?

⁶³ Although critics rightly contrast Raymond and Adrian, often in terms of Byron and Shelley’s distinct iterations of Romanticism, in his romantic military call to arms and reference to a kind of last stand, Adrian echoes Raymond’s heroic posturing when he enters Constantinople.

The logic of anticontagionism allows two solutions. The best is to address living conditions such as overcrowding, hygiene, drainage, and ventilation, as miasma were theorized to emanate from filth, dirt, and decay and to be exacerbated by heat and humidity. In the novel, once the plague begins spreading across the world, and expatriates and foreigners flood into England, Lionel hints at epidemiological concerns about population density. He refers to London as an “overgrown metropolis” (*LM*, 196), prefiguring Conan Doyle’s “great cesspool of empire” toward the fin de siècle. But these concerns can be alleviated if “the cleanliness, habits of order, and manner in which our cities are built, [are] all in our favor” (*LM*, 196). This follows Percy Shelley’s belief in disease as a result of social disorder, one that can be remedied by political reform.⁶⁴ We will see the same thinking appears in Kingsley’s work, where social order, disciplinary techniques, and the conduct of the population materialize through the rhetoric of war. In *The Last Man*, England can fight the disease with biopolitical governance, and Lionel asserts, “Perhaps in no part of the world has [disease] met with so systematic and determined opposition” (*LM*, 196). He then rallies anxious Londoners by appealing to the association between masculinity and militarism and calling for the deployment of these metaphorical barriers against miasma: “If manly courage and resistance can save us, we will be saved” (*LM*, 196).

Yet Raymond’s actions contradict this idea: it was precisely his militaristic drive that fostered the spread of the plague. While we might be quick to condemn Raymond militaristic drive as exacerbating matters, however, the rallies of this scene gesture toward the martial rhetoric of Lionel’s political reforms, marking them as anticontagionist politics. In an echo of the quotation that opened this chapter, Lionel draws on the metaphor still more explicitly: “We will fight the enemy to the last. Plague shall not find us a ready prey; we will dispute every inch of

⁶⁴ Bewell describes this at length in his chapter on Percy Shelley. See *Romanticism and Colonial Disease*.

ground; and by methodical and inflexible laws, pile invincible barriers to the progress of our foe” (*LM*, 196). The methodological and inflexible laws here are sanitary principles based on science of nature: barriers that public policy and practice set in motion.

More informs Lionel’s speech than confidence in systematic intercession by the state, however. He contends that “perhaps no country is naturally so well protected against our invader,” suggesting that England can rely on the geography provided by nature: the best defense is to live in the most “naturally” salubrious territory, England itself. Lionel adds to this that nature has not “anywhere been so well assisted by the hand of man” (*LM*, 196): England is naturally salubrious, but it still needs the civilizing work of the English social order to make it livable. As Adrian puts it, “The labour of hundreds of thousands alone could make this inclement nook fit habitation for one man” (*LM*, 258).⁶⁵ As the novel progresses, Shelley dismantles the colonial logic that naturalized the struggle with epidemic disease in colonial societies but credited European societies with resistance to it.⁶⁶ The resulting ideology led to England’s most disciplined and efficient application of biopolitical techniques to the salubrious construction of the land, and marks the connection between the climatological and humoral theories of disease—two discourses that anticontagionism drew on—vis-à-vis the martial metaphor.

In contrast to the martial metaphor’s conduciveness to the binary logic of normal-versus-pathological, humoral medicine defined disease along a spectrum of intensity. Preceding the debates between contagionism and anticontagionism—although closely tied to the latter’s miasma theory—were the climatological and humoral theories of disease. Humoral medicine generally speaking portrayed disease as an imbalance among the four humors—black bile, yellow bile,

⁶⁵ *Ibid.*, 302.

⁶⁶ *Ibid.*, 306.

blood, and phlegm—and had Hippocratic and Galenic iterations.⁶⁷ While the theory was generally older, it persisted until the mid-nineteenth century, and its ontological residue remained in the conceptual framework of miasma theory. Before 1817, for instance, cholera was understood mainly in humoral terms. An excess yellow bile, or *cholera*, became *cholera morbus* only when increased severity made it a disease.

However, humoral medicine was not incompatible with climatological theories, according to which disease was highly contingent on environment. While climatological medicine developed alongside humoral medicine throughout the first millennium, it reached its apex only in the late eighteenth century.⁶⁸ One cause of the difficulty in parsing contagionism and anticontagionism is the lingering influence of climatological theories, in which *climate* meant geography: weather and meteorology influenced the environment through the air, which was also the proximate cause of disease according to the anticontagionist. The humoral medical discourse on “the tropics” was thus climatological insofar as weather and temperature affected European bodies depending on their constitution.⁶⁹ This concept, which Mary Floyd-Wilson has aptly

⁶⁷ For more extensive histories of humorism, see Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 2013); and Noga Arikha, *Passions and Tempers: A History of the Humours* (New York: Ecco, 2007). Worth noting here is the way humorism changes in the eighteenth century by means of mechanist and solidist views of the body, which displaced the ideas of fluids to focus on structures, but still worked in logics of balance. At odds with some solidism and mechanism was vitalism, which found the source of life in a vital immaterial force within the body. But as with contagionism and anticontagionism, the boundaries between vitalist and materialist theories were often blurry, for instance in the case of fibre theory. See Porter, *The Greatest Benefit*, 261, 47–48, 307. On fluidism, solidism, and the fibre body, see Hisao Ishizuka, “‘Fibre Body’: The Concept of Fibre in Eighteenth-Century Medicine, C.1700–40(1),” *Medical History* 56, no. 4 (2012).

⁶⁸ National Research Council Committee on Climate, Ecosystems, Infectious Disease, and Human Health, *Under the Weather: Climate, Ecosystems, and Infectious Disease* (Washington, DC: National Academy Press, 2001), 14.

⁶⁹ See also Cohen, *A Body Worth Defending*, 212.

termed “geohumoralism,” was popular for much of the early modern period.⁷⁰ Bodies were prone to different disease states depending on race, diet, and other factors, a point Shelley alludes to when Lionel asserts that “bodies are sometimes in a state to reject the infection of malady, and at others, thirsty to enbibe it” (185)—an ironic figuration, considering the water-borne nature of cholera, discovered in 1854 by John Snow. Environment, in the capacity of weather, was of primary interest to the climatological inflections of humorism: a person’s humoral balance could be thrown off by a region’s temperature, and certain people were prone to particular imbalances that made them incompatible with certain locales.

Although the martial metaphor appears in humoral theory in the sixteenth and seventeenth centuries, notably in Thomas Sydenham’s work, humoral medicine did not generally view disease as an entity or force from outside the body, so the image of medicine as war did not come to the fore under this epistemological framework. There was a degree of movement toward the idea of the external invading the internal, but even in geohumoral discourse this did not quite reach the threshold of the inimical framing that appears in nineteenth-century contagionist and anticontagionist theories. In contrast to the analog quality of balance in humoral theory, miasma or contagion either does or does not make its way into the body, generally speaking. While much of the discourse about construction did suggest that environment could alter health, this too tended toward essentialism, as certain races were characterized as more prone to certain humoral temperaments and imbalances.

The climatological and miasmatic disease theories both became more conducive to the martial metaphor for two reasons: First, in metaphorical terms, miasma became a disease object external to the body and consequently to be understood as a kind of invading force, with either

⁷⁰ Mary Floyd-Wilson, *English Ethnicity and Race in Early Modern Drama* (Cambridge, UK; New York, NY: Cambridge University Press, 2006), 3.

the weather of a foreign land invading the colonizer or the pestilent wind of the East traveling to invade England. Second, in material terms, climatological understandings were closely tied to British military and colonial efforts, which takes us back to the martial metaphor's material ties to war. At the intersection of the two, we find a set of fostering conditions for the martial metaphor: external disease agents and material connections to the military.

Even apart from disease etiology, however, the cultural work of empire and nation on medical definitions was crucial to defining the imaginative construction of British identity. With respect to climate, geography framed the biomedical identities and boundaries of the modern world. Although climate was appealed to throughout the eighteenth century to frame colonial and Asiatic environments as pathogenic, a more complicated formulation emerged late in the century that attributed a region's pathogenicity to social and economic factors as well,⁷¹ the central concerns of the arriving anticontagionist movement. In Bewell's words, "'tropics' shifted from being a climatic term to a being a social, biological, and medical construction."⁷²

Even after the shift away from the humoral notion of constitution, climatological discourse stayed tied to tropical medicine, anticontagionism, and colonialism, especially in their military iterations. In *The Last Man*, Lionel's description of miasma follows this Orientalist logic, one contingent on geography and climate. In an allusion to Percy Shelley's "Ode to the West Wind," he apostrophizes, "Then mighty art thou, O wind, to be throned above all other vicegerents of nature's power; whether thou comest destroying from the east, or pregnant with elementary life from the west" (*LM*, 183). Following the colonial-discourse-informed debates about disease, the pathogenic wind comes from the East, much like the Asiatic cholera in

⁷¹ Bewell, *Romanticism and Colonial Disease*, 18.

⁷² *Ibid.*

Shelley's time, and in contrast to the west wind, which is characterized in both fecund and virile terms. Miasmatic wind is a function of the weather, notably of climatological figures of the sublime, such as the snow and the ocean. This contrast between East and West figures prominently in the isolationist rhetoric Lionel projects in the early part of the novel.

The Last Man presents and then undercuts an ideological construction of England as a naturally healthy country and people, but one that further catalyzes the martial metaphor by requiring synthetic defenses. The isolationist logic at work in the British responses discussed above to the 1817 epidemic is present through the first half of *The Last Man*. For instance, in the earliest responses to rumors of the plague's invasion of Athens, isolation, order, and salubrity are used to frame the "natural" condition of England. Lionel says, "We, in our cloudy isle, were far removed from danger" (*LM*, 179). Though England requires social order to make its state of nature habitable, its location and weather make it pathostatic: not conducive to the production of disease. Lionel's "cloudy" thus does not connote miasma, but the ironically romantic fantasy of England's natural superiority to the forces of nature. The arrogance that underlies this position speaks to both climate and constitution, connecting the humoral and climatological theories and thus being somewhat essentializing but also contingent, as Lionel suggests when he remembers thinking through the plague. Recall the speech Lionel gives to quell the anxious citizens, in which England's "cleanliness, habits of order, and the manner in which [its] cities were built" will provide protection (*LM*, 196). The figure of England as a cloudy isle immune to colonial and Asiatic disease is based on a number of traits of superiority the English possess: not only the country's status as an island and its cold climate, but its "naturally" civilized, hygienic social order. To this effect, as with the familiar logic of the normal and the pathological, England's salubrity is differential, contingent on the naturally pathogenic construction of the East.

England's separation from the East by other countries and its adamant wall of water give it additional protection, contributing to the naturalization of defense from foreign disease: "England was still secure. France, Germany, Italy, Spain, were interposed, walls without a breach" (*LM*, 185). Showing some humility before the sublimity of nature, Lionel redoubles on the sentiment of security, suggesting that others' "vessels," both nautical and bodily, were "truly were the sport of the wind and waves, even as Gulliver was the toy of the Brobdignagians, but we on our stable abode could not be hurt in life or limb by these eruptions of nature. We could not fear – we did not. Yet a feeling of awe, a breathless sentiment of wonder, a painful sense of the degradation of humanity was introduced into every heart" (*LM*, 185).

Lionel revisits the sublimity of disease with much more deference when he addresses Shelley's notion that, contrary to Godwin's espousal of progress and the ultimate perfection of humankind,⁷³ the "fight" against disease is ultimately futile. Deploying the logic of the martial metaphor through the language of boundaries and quarantine, he rallies the English spirit, which is naturalized to overcome any barrier to liberal prosperity: "The English spirit awoke to its full activity, and, as it had ever done, set itself to resist the evil, and to stand in the breach which diseased nature had suffered chaos and death to make in the bounds and banks which had hitherto kept them out" (*LM*, 187–88). The ethos of Englishness stands to fill the "breach" in the hermetic, insular identity of the isles caused by disease and to draw conceptual boundaries and defenses against biopolitical disorder, here figured as the foreign other.

The military language used to describe England's climatological resiliency to the plague frequently figures disease as weaponry, suggesting that disease may be stopped by human intervention; however, it seems that only nature herself can provide sufficient shield, and as the

⁷³ Ibid.

narrative progresses, England's natural environment turns out not to be strong enough. After the plague breaches the cloudy isle, England's climatological advantage does stymie the progress of the miasmatic apocalypse. Winter is thought to be a "never-failing physician" (*LM*, 190) on both climatological and miasmatic grounds: "Winter was coming, and with winter, hope. In August, the plague had appeared in the country of England, and during September it made its ravages. Towards the end of October it dwindled away, and was in some degree replaced by a typhus, of hardly less virulence" (*LM*, 214). Lionel expresses hope that the English frost "would blunt the arrows of pestilence, and enchain the furious elements; and the land would in spring throw off her garment of snow, released from her menace of destruction" (*LM*, 214). But though the disease recedes during the winter, it returns with the warmer months: "Summer advanced, and, crowned with the sun's potent rays, plague shot her unnerving shafts toward the earth" (*LM*, 220).

The isolationist logic that holds England to be naturally pathostatic is analogous to a popular belief about the 1817 cholera epidemic: when Asiatic cholera was discovered to be different from the English *cholera morbus*, many people concluded that it could not survive in the English climate.⁷⁴ Lionel represents this attitude when he recalls trying to convince himself that the plague was endemic to colonial spaces:

The vast cities of America, the fertile plains of Hindostan, the crowded abodes of the Chinese, are menaced with utter ruin. . . . Countrymen, fear not! In the still uncultivated wilds of America, what wonder that among its other giant destroyers, Plague should be numbered! It is of old a native of the East, sister of the tornado, the earthquake, and the simoon. Child of the sun, and nursling of the tropics, it would expire in these climes. It drinks the dark blood of the inhabitant of the south, but it never feasts on the pale-faced Celt. If perchance some stricken Asiatic come among us, plague dies with him, uncommunicated and innocuous. Let us weep for our brethren, though we can never experience their reverse. (186–87)

⁷⁴ *Ibid.*, 308.

Lionel's description of the plague as an "old native of the east" and a "nursling of the tropics," like his linking of it to uncultivated America,⁷⁵ not only follows the belief that Indian cholera was different from English cholera, it deploys the rhetoric of time and history to link it with primitive culture, in contrast to advanced European civilization.⁷⁶ Moreover, Lionel draws on both climatological and contagionist logic to ameliorate concerns of the disease spreading to England. In a notable pre-germ theory agentification of disease, he contends that the disease will "expire" in England's climate; he addresses the possibility of contagion by saying it would "die" with the "stricken Asiatic," using anthimeria, the rhetorical conversion of one part of speech to another, to metonymically associate the hypothetical invading foreigner with the parts of the world where the disease "naturally occurs." And in addition to etiology, Lionel's speech makes significant reference to the entanglements among empire, economics, and disease.

The Last Man contests England's natural isolation with the economic consequences of plague, a concern that reflects anticontagionist politics. This adds another dimension, beyond the social and epidemiological, to the negative effects of the martial metaphor in its contagionist inflections. Anticontagionists had a stake in the economic worries over quarantine, the main

⁷⁵ The reference to the United States is also informative in reference to an earlier mention of a ship from Philadelphia that carrying a diseased sailor who collapsed and died on the beach in Portsmouth (*LM*, 179). This framing follows Lionel's association of America with disease, which challenges Godwin's belief that America was a model of health and prosperity. See Lauren Cameron, "Mary Shelley's Malthusian Objections in the Last Man," *Nineteenth-Century Literature* 67, no. 2 (2012): 193. Moreover, it links up historically with an epidemic of yellow fever in Philadelphia, the subject of *Arthur Melvyn*.

⁷⁶ The question of endemicity is important to the subjects of medicine and empire even in the contemporary moment. As Claire Hooker et al. have noted, using this terms naturalizes disease to a place, which forestalls intervention in the underlying conditions where the disease is endemic, including social determinants of health such as poverty and infrastructure. See "Dying a Natural Death: Ethics and Political Activism for Endemic Infectious Disease," in *Endemic: Essays in Contagion Theory*, eds. Kari Nixon and Lorenzo Servitje (London: Palgrave Macmillan, 2016).

weapon in the contagionist armamentarium. Shelley reflects these concerns in the novel while linking them to broader notions of national identity related to the martial metaphor and the pre-nineteenth-century roots of anticontagionism. Following the models of Boccaccio's *Decameron* (1353), Defoe's *Journal of a Plague Year* (1722), and other plague narratives in which epidemics unravel the social fabric, Lionel describes the economic harm that England suffers even before the disease biologically touches the English. The plague has halted international trade "by the failure of the interchange of cargoes as usual between us, and America, India, Egypt and Greece" (186). Compounding this is the wave of immigrants fleeing the plague. The foreigners arrive penniless and cannot be supported by state relief, reflecting concerns similar to Chadwick's about the relief of the poor before the 1832 Poor Law. Lionel comments that many of the new arrivals "were utterly destitute; and their increasing numbers forbade a recourse to the usual modes of relief" (*LM*, 186). The economic distresses "were occasioned by the fictitious reciprocity of commerce, increased in due proportion. Bankers, merchants, and manufacturers, whose trade depended on exports and interchange of wealth, became bankrupt" (*LM*, 187). The ultimate effect is that

the prosperity of the nation was now shaken by frequent and extensive losses. Families, bred in opulence and luxury, were reduced to beggary. The very state of peace in which we gloried was injurious; there were no means of employing the idle, or of sending any overplus of population out of the country. Even the source of colonies was dried up, for in New Holland, Van Diemen's Land, and the Cape of Good Hope, plague raged. O, for some medicinal vial to purge unwholesome nature, and bring back the earth to its accustomed health! (*LM*, 187)

In Shelley's representation of these consequences of mere news of and anxieties over disease, before its actual arrival, she reflects the political and economic investments in the debate over cholera's contagious nature. *Health*, in this passage, signals proper, colonial economics: controlled immigration into the homeland and consistent income from the colonies. This framing of England's dependence on Eastern and colonial does not present them in a strictly positive light.

Although Lionel challenges Ryland's isolationist position, which equates the plague with foreign fruit,⁷⁷ and does want to "lament over and assist the children of the garden of the earth" (*LM*, 187), in his own description of the economic losses wrought by the drop in trade he highlights the danger of colonial contact by alluding to the popular association of disease with the colonies. Just before he reports the colonies "being dried up," he writes that "[of] late we envied their abodes, their spicy groves, fertile plains, and abundant loveliness. But in this mortal life extremes are always matched; the thorn grows with the rose, the poison tree and the cinnamon mingle their boughs" (*LM*, 187). The entanglement of the poison and cinnamon trees figuratively frames colonial contact as Janus-faced: profitable and luxurious, yet dangerous and pathogenic. Considering that Lionel's description of the plague's effects echo the fears of liberal anticontagionists, and indeed much of the public, that contagionist cordon laws would have devastating economic impacts, this contradiction between openness to trade and fear of poisonous contact suggests that despite Lionel's progressive politics, he retains conservative anxieties over tropical disease.

With the destruction of the social and political orders, the conditions are set for the plague to thrive: poverty and weak infrastructure. Shelley frames England's position as that of a colonial and commercial power, reflecting the sentiment of her time. But the conditions of that prosperity and of the social and political order it is based on, commerce with other countries and English colonies, dissolve when those partners can no longer engage in maritime trade. This economic fragility highlights the fact that England is not as isolated from the problems of the outside world as the English like to think.

⁷⁷ Melville, *Romantic Hospitality*, 163.

In keeping with the challenge to England's social—rather than economic—isolationism, Shelley invokes the martial metaphor when associating the disease's arrival with the arrival of foreigners. While this resembles the previous linkage between medicine and the military, insofar as *The Last Man's* plague alludes to the British military's encounters with cholera, it goes a step further in the abstraction of the martial metaphor. Following Shelley's primary anticontagionist paradigm, she does not suggest that the foreigners brought the disease with them per se. That position would be martially medical in the contagionist paradigm, and would be in a tenor in which the metaphor often occurs, both then and now; but the disease is already present in England. Instead, the passage reveals the nature of English superiority as constructed through medical discourse. Critics often understand the movement of foreign bodies into English territory through images of invasion and anxieties about reverse colonization,⁷⁸ a discourse we will see later in the century with Stoker and Conan Doyle's writings of the martial metaphor.

The wave of immigrants is martial in its arrival, both figuratively and, at first, materially. Lionel recounts Americans pillaging and quartering themselves in Irish homes after sailing east to avoid the plague. This disruption leads some of the Irish to join the Americans and embark for England, only to be followed by the remaining, rival Irish: “[The American] incursion would hardly have been felt had they come alone, but the Irish collected in unnatural numbers, began to feel the inroads of famine, and they followed in the wake of the Americans for England.” The Irish and American incursions “struck the English with affright . . . [the invaders'] lawless spirit instigated to them to violence” (*LM*, 219). Most significantly, Lionel writes that the foreigners “swept the country like a conquering army, burning – laying waste – murdering. The lower and vagabond English joined with them” (*LM*, 237). He thus associates the lower classes with the

⁷⁸ Melville, “The Problem of Immunity,” 838.

foreign. In response, “some few of the Lords Lieutenant who remained, endeavored to collect the militia – but the ranks were vacant, panic seized on all, and the opposition that was made only served to increase the audacity and cruelty of the enemy. They talked of taking London, conquering England – calling to mind the long detail of injuries which had for many years been forgotten” (*LM*, 237).

This invasion follows the lines of what Yumna Siddiqi has characterized a colonial “return of the repressed” in Conan Doyle’s writings.⁷⁹ With it, Shelley produces something different from the leveling of social hierarchies in Boccaccio’s and Defoe’s plague narratives: this plague not only reverses the social order in England, it reconfigures the imperial order that had been secured by the material, economic, and ideological supports of England’s superiority. Read in the context of the plague and its colonial origins, this revolution challenges the material logic of England’s imperial power, which could seemingly establish connections for profit while remaining impervious to colonial exposure. The reversal of the imperial order also leads to military encounters, which can have either of two consequences: the amplification of military defense and the inimical construction of the foreigners, who do not carry disease per se but take advantage of its destabilizing effects; or a change to the isolationist and exceptionalist imperatives, embracing the other in the face of shared vulnerability to disease. Shelley alludes to both options toward the end of the novel’s second volume.

Shelley’s catalogue of the invasion of England also follows a pattern similar to the chapter in which Raymond seizes Constantinople: Artillery and arms are collected, troops led, banners carried, and as in the Warsaw cholera illustration and the siege of Constantinople, smoke

⁷⁹ See “The Cesspool of Empire: Sherlock Holmes and the Return of the Repressed,” *Victorian Literature and Culture* 34, no. 01 (2006). With respect to *The Last Man*, see Jane Aaron, “The Return of the Repressed: Reading Mary Shelley’s *The Last Man*,” in *Feminist Theory: Criticism and Practice*, ed. Susan Sellers (Toronto: University of Toronto Press, 1991).

from the cannons “filled up the horror of the scene” (*LM*, 240). Adrian aggressively raises his sword and orders the invaders to surrender:

We shall conquer, for the right is on our side; already your cheeks are pale—the weapons fall from your nerveless grasp. Lay down your arms, fellow men! brethren! Pardon, succor, and brotherly love await your repentance. You are dear to us, because you wear the frail shape of humanity; each one among you will find a friend and host among these forces. Shall man be the enemy of man, while plague, the foe to all, even now is above us, triumphing in our butchery, more cruel than her own? (*LM*, 240).

The ultimate sign of alliance is a single, fallen soldier whom Adrian approaches and laments: “It was as if the fate of the whole world seemed bound up in the death of this single man” (*LM*, 241).

This is a crucial point, for it signals Shelley’s rejection of the statistical calculus of life that is inherent in both Malthusian prediction and biopolitical governance, as I suggest in the following section. The armies proceed to join “hand-in-hand” and “assist each other.” Melville accurately reads this scene as indicative of the English reminder of their “community in death with foreign,” that “the other can inspire both fear and sympathy,”⁸⁰ and that, as the novel ultimately shows, the plague, “the enemy of man,” unites all people under the auspices of “the frail shape of humanity.” England is eventually deserted by the remaining human population, a mix of Americans and Western Europeans.

This peace, however—like the realization that the Greeks were fighting the plague and not the Turks—does not put an end to the military conflicts that arise from the shattered social order in the wake of the plague. And this challenges the utopian hope that the fight against disease has a necessarily unifying effect—that under its aegis the martial metaphor will “make [all] live.” In the section that follows, I show how Shelley’s figuration of disease as sublime force provides the possibility of unification in affirmative terms of inclusion, but also leads to the divisive and exclusionary logics of the martial metaphor.

⁸⁰ Melville, *Romantic Hospitality*, 167.

On the Nature of the Pestilential Sublime and Shipwrecked Humanity

Shelley's association of disease with the sublime forces of nature makes it tempting to read the novel as a taking a pessimistic outlook, in contrast to other Romantics' utopian optimisms. If disease is a figure of awe and terror—like a deity or a pantheistic nature, something that is incalculable and inconceivable in magnitude—can the subject or the state respond martially at all?

In the novel, the miasmatic cloud, shapeless, unquantifiable, and threatening, a product of nature but exacerbated by human social conditions, is a figure of the sublime.⁸¹ On first reading, the presentation of the disease as a sublime force of nature seems to oppose the martial metaphor. When disease is equated with natural forces and oceanic storms, there is little purpose to fighting it; one can endure a storm, but not fight it, much as one cannot to anything but endure a disease that one sees as a punishment from God. As Burke suggests, however, the sublime can also trigger a bellicose response by inciting the instinct to self-preservation. On a Kantian understanding, moreover, the sublime makes the subject feel limitless in her ability to grasp and overcome nature.⁸² The relationship between the sublime and the martial metaphor, much that between the novel's and disease, is far from straightforward. Perhaps the best the sufferers can hope for is to "navigate" the turbulence of the plague with ethical action that does not conflate the one with the many or the foreign with the diseased. In the novel, the sublime force of the sea

⁸¹ Even in our post-germ theory era, when disease can be objectified as individual cells down to their subatomic structures, their sheer quantity and variety quickly become inconceivable in magnitude. Byron Breedlove has called this the "microbial sublime." See "Delicacy and Durability: The Microbiological Sublime," *Emerging Infectious Diseases* 25, no. 1 (2015).

⁸² Vanessa L. Ryan, "The Physiological Sublime: Burke's Critique of Reason," *Journal of the History of Ideas* 62, no. 2 (2001): 267.

functions as a topos to explain Shelley's blending of disease theories, her rejection of her husbands' and her fathers' faith in Romantic, utopian progress, and her understanding of the futility of the martial metaphor.

Disease can be considered sublime in the way it invokes terror and awe at its immeasurability as a force of nature; it is difficult to conceptualize, particularly before germ theory. For Burke, the sublime is "whatever is fitted in any sort to excite the ideas of pain and danger. . . . Whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror is a source of the sublime."⁸³ The sublime is experienced when one encounters something dangerous that triggers a fear of pain, particularly natural objects that seem vast and infinite; a kind of terror is evoked by the inability to fully comprehend the object.

This feeling triggers bodily reactions in turn, as Vanessa Ryan has suggested in terms of Burke's "physiological sublime."⁸⁴ The connection to the body certainly relates the sublime to medicine and disease: Burke discusses material changes in the nervous system, and describes the sublime as evoking delight, "the sensation which accompanies the removal of pain or danger."⁸⁵ He also gives the example of health: "When we recover our health, when we escape imminent danger, [it is] with a sense of joy we are affected."⁸⁶ This, we are told, is why looking over a precipice is a sublime experience. It also means that the object cannot be too near or presenting too immediate a threat: "When danger or pain press too nearly, they are incapable of giving

⁸³ *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful* (London: N. Hailes, 1824), 34.

⁸⁴ "The Physiological Sublime," 266.

⁸⁵ Burke, *A Philosophical Inquiry*, 31.

⁸⁶ *Ibid.*, 33.

delight.”⁸⁷ The body experiences terror of certain circumstances “without being in such circumstances.” I will address how *The Last Man* figures into the seeming dichotomy between fiction and true experience, but for the moment I will discuss how Shelley writes the plague in the language of the sublime, and how this construction is connected to the martial metaphor.

In *The Last Man*, the sublimity of the plague has a number of valences: the way it inspires pain and danger, the way it threatens life, the difficulty of delimiting it conceptually and the impossibility of controlling it, its ability to travel across continents, and its seemingly incomprehensible material reality. And the idea of the sublime helps us understand the martial metaphor outside the framework of the natural. A number of phenomena other than natural forces fall under the rubric of the sublime, such as war.⁸⁸ The plague’s connection with war, as described during Raymond’s siege on Constantinople, is one example. And, referring to Benjamin West’s painting *Death on a Pale Horse* (1796),⁸⁹ Lionel recounts the sublimity of the encounter with death through the narrative frame of war:

⁸⁷ Ibid., 34.

⁸⁸ In *The Works* (1837), Hildebrand Jacob outlines a number of images that had been associated with the sublime by the first quarter of the nineteenth century: “All the vast, and wonderful scenes, either of delight, or horror, which the universe affords have this effect upon the imagination, such as unbounded prospects, particularly that of the ocean, in its different situations of agitation or repose; the rising or setting sun; the solemnity of moon light; all the phenomena in the heavens, and objects of astronomy. We are moved in the same manner by the view of dreadful precipices; great ruins; subterraneous caverns, and the operations of nature in those dark recesses . . . the sight of numerous armies, and assemblies of people . . . the whispering of winds; the fall of waters in cataracts, or heavy showers; the roaring of the sea; the noise of tempests amongst lofty trees; thunder; the clash of arms, and voice of war. Few can read in Milton the . . . description, which he has given, of the opening of the infernal gates, without some emotion.” Cited in Andrew Ashfield and Peter de Bolla, eds., *The Sublime: A Reader in British Eighteenth-Century Aesthetic Theory* (Cambridge: Cambridge University Press, 1996), 53.

⁸⁹ See Pamela Bickley’s note in Mary Shelley and Pamela Bickley, *The Last Man*, 383. This image of the apocalypse has a prominent Romantic history. John Hamilton Mortimer (1775) has a drawing by the same name, and William Blake has a watercolor (1800).

I have heard a picture described, wherein all the inhabitants of earth were drawn out in fear to stand the encounter of Death. The feeble and decrepit fled; the warriors retreated, though they threatened even in flight. Wolves and lions, and various monsters of the desert roared against him; while the grim Unreality hovered shaking his spectral dart, a solitary but invincible assailant. Even so was it with the army of Greece. I am convinced, that had the myriad troops of Asia come from over the Propontis, and stood defenders of the Golden City, each and every Greek would have marched against the overwhelming numbers, and have devoted himself with patriotic fury for his country. But here no hedge of bayonets opposed itself, no death-dealing artillery, no formidable array of brave soldiers – the unguarded walls afforded easy entrance – the vacant palaces luxurious dwellings; but above the dome of St. Sophia the superstitious Greek saw Pestilence, and shrunk in trepidation from her influence. (*LM*, 152–53)

In this scene, Lionel describes an aftermath of war like that portrayed in *Death on a Pale Horse*, with the conditions prime for disease. The painting depicts the Four Horseman of the Apocalypse—Death, War, Famine, and Pestilence—in a scene where humans “stand” against Death, who assaults them in the midst of fighting warriors. This resonates with the image of cholera as Death in the Seymour illustration I discussed above. It also recalls Evadne’s dying curse on Raymond: “Fire, and war, and plague, unite for thy destruction” (145). The allusion to West’s painting invokes what Morton Paley has called “the apocalyptic sublime.”⁹⁰ War is sublime in its vastness,⁹¹ as its scale is often incomprehensible; it evokes terror and produces a man-made analog of the destructive forces of nature.

West’s iteration of the sublime links biblical figurations of divine revelation and judgment with war to produce a thrill and a terror, a sense that effervesced out of the period of the French Revolution, the Napoleonic Wars, and the agitation for reform.⁹² Reversing the direction

⁹⁰ See Morton D. Paley, *The Apocalyptic Sublime* (New Haven: Yale University Press, 1986).

⁹¹ On the sublimity of war and its closer relation to Kantian than Burkean interpretations, see Michael Gelven, *War and Existence: A Philosophical Inquiry* (University Park, PA: Pennsylvania State University Press, 1994). See also François Debrix, “The Sublime Spectatorship of War: The Erasure of the Event in America’s Politics of Terror and Aesthetics of Violence,” *Millennium: Journal of International Studies* 34, no. 3 (2006).

⁹² Avril Horner and Sue Zlosnik, “The Apocalyptic Sublime: Then and Now,” in

of the martial metaphor, Mary Shelley also famously characterizes war as a disease with respect to these two conflicts: “The distress of the inhabitants, whose houses had been burned, their cattle killed, and all their wealth destroyed, has given a sting to my detestation of war, which none can feel who have not travelled through a country pillaged and wasted by this plague, which, in his pride, man inflicts upon his fellow.”⁹³ Thus even if disease is a sublime natural force, it is one exacerbated by the human social failure of war. This invocation of the sublime, especially in its connection to war and the military, informs the way Shelley writes the relationship between humans and disease: war is an amplifier of disease. It also recalls the historical context of cholera and the British military in which Shelley wrote *The Last Man*: war produces ecological changes to humankind’s relationship to nature. While disease is sublime as a natural force and out of humankind’s control, war, which exacerbates disease, it is a product of social failure.

The most prominent connection between the sublime and the plague is the sea: its association with wind, storms, and nature connect it to climatological and miasmatic understandings of disease. The ocean, and the oceanic storm in particular, may be the most emblematic instance of the sublime, as Burke and other contemporary critics suggested.⁹⁴ The connections between the plague and the sublimity of storms at sea recalls climatological and miasmatic disease theories by virtue of forces like the wind, which affects temperature and other factors of epidemiology. Following Shelley’s association of the plague as a force of nature with

Apocalyptic Discourse in Contemporary Culture: Post-Millennial Perspectives, ed. Aris Mousoutzanis Monica Germana (Routledge, 2014), 59.

⁹³ *History of a Six Weeks’ Tour through a Part of France, Switzerland, Germany and Holland: With Letters Descriptive of a Sail Round the Lake of Geneva, and of the Glaciers of Chamoun* (London: T. Hookham, 1817), 19.

⁹⁴ Barbara Claire Freeman, *The Feminine Sublime Gender and Excess in Women’s Fiction* (Berkeley, CA; London: University of California Press, 1997), 17. See also Paley, *The Apocalyptic Sublime*.

the sublime manifestations of the sea, humankind and its social structures are figured as a ship. This analogy has a number of implications for the history of disease and biopolitics. Consistently with Lionel's repeated references to England as the center of humankind and its progress before the plague, the novel opens with a naval figuration that follows the logic of this imaginative construction: "England, seated far north in the turbid sea, now visits my dreams as a well-manned ship, which mastered the winds and rode proudly over the waves . . . the earth's very centre was fixed for me on that spot, and the rest of her orb was a fable" (*LM*, 5). Lionel is writing after the plague has left him, as the last man, and he now dreams only of what was. Toward the end of the novel, we see the point at which this idea of English mastery changed. Lionel gazes upon a sea-storm, a kind of analog of the plague that works coextensively with it, and, he recalls, "A sublime sense of awe calmed the swift pulsations of my heart—I awaited the approach of the destruction menaced, with that solemn resignation which an unavoidable necessity instils" (*LM*, 270). The image of naval mastery signals the presumed superiority of the British navy and England's ability to subdue nature; Shelley goes on to suggest that this ideology itself is the fable.

The relationship with nature is paradoxical, undercutting the picture of English superiority that Lionel and Adrian at first present, because nature is Janus-faced. In the time before the plague, nature is at once a force to be reckoned with—"the turbid sea"—and one that is ultimately controllable and usable for societal ends—"master[ing] the winds." And at the same time, nature in its threatening aspect provides England with a socially valuable "natural" defense against military and biological threats. Hinting at the unraveling of this fable even before the plague makes its way to England, Lionel writes,

We wept over the ruin of the boundless continents of the east, and the desolation of the western world; while we fancied that the little channel between our island and the rest of the earth was to preserve us alive among the dead. It were no mighty leap methinks from Calais to Dover. . . Yet this small interval was to save us: the sea was to rise a wall of adamant—without, disease and misery—within, a shelter from evil, a nook of the garden of paradise—a particle of celestial soil, which no evil could invade... (*LM*, 183)

The sea takes on an almost mythical strength to protect England from external threats, both natural and human military in origin. Once the plague begins to spread, however, the references to it gain inimical and apocalyptic connotations. Evoking residues of humorism, the weather turns for the worst: “SOME disorder had surely crept into the course of the elements, destroying their benignant influence. The wind, prince of air, raged through his kingdom, lashing the sea into fury.” Lionel continues,

The God sends down his angry plagues from high,
Famine and pestilence in heaps they die.
Again in vengeance of his wrath he falls
On their great hosts, and breaks their tottering walls;
Arrests their navies on the ocean’s plain,
And whelms their strength with mountains of the main. (*LM*, 183)

Shelley presents the plague as an arrow fired by a god, recalling the reference to war as a figure of the apocalyptic sublime. Here we see a shift away from Christian revelation to pantheistic nature as the sublime force of the apocalyptic. Presenting a conflation of nature, disease, weather, and divine punishment, Shelley describes the effects of disease on military forces: the plague “arrests” humankind’s naval forces much like a storm. On the one hand, this helps her construe nature as an antagonist, fighting against naval forces, which is conducive to the language of the martial metaphor. On the other, and more consistently with the narrative logic of the novel, it reminds us fighting against nature, like fighting against angry deity, is impossible.

This futility does not preclude an affirmative politics, a “politics of possibility.”⁹⁵ In Shelley’s understanding, engaging the slings and arrows of the pestilential sublime could be less a martial act than a means of conducting a population toward a common end, which need not be militaristic—it could be a way of seeking to “make live” without the condition of “letting die.”

⁹⁵ Wang, “We Must Live Elsewhere,” 26.

The problem arises when regulatory biopolitics, which takes a statistical view of the population, diluting the single life into the background of the many. In the wake of the plague, Lionel invokes this affirmative principle, resisting the thanopolitical inherent in regulatory biopolitics, and holding life above territory and imperial power in a manner that does not follow Foucault's biopolitical model or its historical iterations. Alluding to the statistical technologies inherent in biopolitical regulation and the Malthusian limiting factor of food,⁹⁶ Lionel laments, "The hunger of Death was now stung more sharply by the diminution of his food: or was it that before, the survivors being many, the dead were less eagerly counted." Instead, with the new diminution of the population—where, unlike in Malthus's picture, food is abundant—"each life was a gem, each human breathing form of far... and the daily, nay, hourly decrease visible in our numbers, visited the heart with sickening misery. This summer extinguished our hopes, the vessel of society was wrecked, and the shattered raft, which carried the few survivors over the sea of misery, was riven and tempest tost" (*LM*, 254).

In defiance of the biopolitical imperative to calculate births, deaths, and mortality and adjust governance accordingly, the plague in Shelley's novel is incalculable, again signaling its link to the sublime;⁹⁷ her pestilential sublime explodes the biopolitical. The irony is that when the plague was a mere rumor, the danger it posed to England was so small as to be "incalculable"; by the time England is "wrecked," however, the scale of its threat is infinite. This follows the way that, in a periodic reversal of the biopolitical calculus of the mass, Shelley concludes the novel with the titular, singular last man.

⁹⁶ For a reading of *The Last Man* with respect to Malthus, see Cameron, "Mary Shelley's Malthusian Objections."

⁹⁷ Ranita Chatterjee has demonstrated the trope of counting as it pertains to biopolitics in the novel. See "Our Bodies, Our Catastrophes: Biopolitics in Mary Shelley's the Last Man," *European Romantic Review* 25, no. 1 (2014): 46.

Shelley's response to disease does not follow most of much of Romanticism's ways of thinking about human perfectibility. *The Last Man's* documentation of the slow demise of humankind, weathered away by nature, stands in sharp contrast to Godwin's and Percy Shelley's belief in the inherent progress of humanity toward utopia, especially in the case of control over disease. Shelley not only challenges this Romantic attitude but also the opposing utilitarian pole that espoused biopolitical calculation. In the utilitarian logic of biopolitical governance, the individual matters little against the progress of the whole. Lionel, trying to comfort himself when the plague threatens England, asserts, "We call ourselves lords of the creation, wielders of the elements, masters of life and death, and we allege in excuse of this arrogance, that though the individual is destroyed, man continues forever" (*LM*, 184). Thinking of the unimportance of the single life in the context of the war against disease, he continues: "Thus, losing our identity, that of which we are chiefly conscious, we glory in the continuity of our species, and learn to regard death without terror" (*LM*, 184). But when he looks back on what has already happened, Lionel intimates that the Romantic progressive utopianism is not so assured. What comfort, he asks, can one take in sacrifice? Rather, "when any whole nation becomes the victim of the destructive powers of exterior agents, then indeed man shrinks into insignificance, he feels his tenure of life insecure, his inheritance on earth cut off" (*LM*, 184). Here Lionel equates the vitality of all of humanity with that of the nation, invoking the discourse of military invasion, and portrays disease as borne by "exterior," inimical agents. And as a result, humans are no longer the inheritors of the earth: Animals and ecological systems are unaffected by the plague; humans are its only

victims.⁹⁸ In opposition to humanity qua nation, the plague itself is written as a kind of sovereign, which we can read as military force.⁹⁹

These conclusions show how Shelley suggests that humans are *subject* to the random, incalculable limiting factor of disease; they will not necessarily progress to social control over disease; and human suffering should not be calculated through a Malthusian or biopolitical logic. Thus, ethical practice must be focused on empathetic bonds with individuals, with “Others.”¹⁰⁰ This reading of shipwrecked humanity is linked to the ethical imperatives implicit in Burke’s account of the sublime experience.

The image of the shipwreck, as Riding has argued, is connected to the Burkean premise of self-preservation in the sublime experience. In defining the sublime, Burke argues that

The passions which belong to self-preservation, turn on pain and danger; they are simply painful when their causes immediately affect us; they are delightful when we have an idea of pain and danger, without being actually in such circumstances; this delight I have not called pleasure, because it turns on pain, and because it is different enough from any idea of positive pleasure. Whatever excites this delight, I call sublime. The passions belonging to self-preservation are the strongest of all the passions.¹⁰¹

Readers of Shelley’s novel could feel Lionel’s terror, and their experience would incite the self-preservation; yet, they would feel delight knowing “they are not actually in such circumstances.”¹⁰² To this effect, we might attempt to parse the distinction between Lionel’s experience—as he is, in the reality of the fictional world, actually facing the disease—and that of the novel’s readers. As J. Jennifer Jones has contended, however, Shelley’s novel blurs the

⁹⁸ Cameron, “Mary Shelley’s Malthusian Objections,” 183.

⁹⁹ Chatterjee, “Our Bodies, Our Catastrophes,” 4.

¹⁰⁰ Cameron, “Mary Shelley’s Malthusian Objections,” 178.

¹⁰¹ Burke, *A Philosophical Inquiry*, 48.

¹⁰² *Ibid.*

distinction between real and fictional experiences on which Burke's critical distance depends. Moreover, the novel not only explicitly references and represents the Burkean sublime in the imagery Lionel presents, it "re-conceptualizes [Burke's] theory, becoming a sublime text in its own right."¹⁰³

This reaction might seem solipsistic, as the self-preserving response to the sublime appears to be in contrast with "the beautiful which influences social interaction." However, Burke's sublime works through a paradoxical relationship between the individual and the whole: although the sublime experience occurs in the individual, it stimulates the individual toward action and the social. The delight in the sublime strengthens the bond of sympathy, as one can imagine the pain of others and consequently "during the sublime experience we imagine the experience of . . . victims and our powers of fellow-feeling are strengthened."¹⁰⁴ In Burkean terms, the sublime confronts us with our finitude and limitations, which triggers self-preservation, and through the recognition of the possibility of kindred pain and fragility in others produces sympathy and action—making the sublime experience a moral and an ethical one.

But as others have noted, Shelley's views do not map fully onto Burke's political philosophy. For Burke, conservative organicism could foresee a triumph over disease¹⁰⁵ in an ultimate progression of man rather like Percy and Godwin's. Therefore, Shelley espouses empathetic drive for social action but takes Burke's position to its logical extreme, where it seems at first that "man continues forever," but in fact the sublime force of disease demonstrates that man has no essential inherence to the earth.

¹⁰³ "The Art of Redundancy: Sublime Fiction and Mary Shelley's *The Last Man*," *The Keats-Shelley Review* 29, no. 1 (2015): 30.

¹⁰⁴ Ryan, "The Physiological Sublime," 277.

¹⁰⁵ Jones, "The Art of Redundancy," 28.

One could argue that the Burkean sympathetic response might trigger collective action against disease, in the vein of the martial metaphor creating a “unified war.” But I would suggest this kind of response would be more contingent on a Kantian understanding of the sublime with respect to the natural force of disease.¹⁰⁶ For Kant, the terror and awe invoked by the sublime experience come from the initial feeling of being overpowered, and this momentary inhibition produces empowerment and strength: “Might is an ability that is superior to great obstacles. It is called dominance if it is superior even to the resistance of something that itself possesses might. When in an aesthetic judgment we consider nature as a might that has no dominance over us, then it is *dynamically sublime*.”¹⁰⁷ Read through a Kantian lens, the martial metaphor empowers the self in its ability to impose a narrative order—war—and contain the incomprehensibility of disease, especially at the epidemic scale. And the delimiting of disease into an understandable concept is analogous to the boundaries of the cordon. This is the logic that subtends Adrian’s belief that because “the will of man is omnipotent,” humans can “blunt . . . the arrows of death, sooth . . . the bed of disease” (60). This is not to say that a Kantian reading excludes an empathetic desire to tend to the interactions of social relations and material practices with nature. Percy Shelley held this very position,¹⁰⁸ like Godwin considering disease to be a social problem: “Kings, statesmen and priests,” he writes in *Queen Mab*, create “venomous exhalations . . . spread / Ruin, death, and woe.”¹⁰⁹ In *The Last Man*, Shelley advocates for social action but distances

¹⁰⁶ Steven Vine also contends that Shelley writes against the Kantian sublime, arguing that her representation of the disease as sublime suggests that plague is an excess of meaning, that it exceeds symbolic discourse, and this is a projection of the feminine sublime as an excess of patriarchal representation. See “Mary Shelley’s Sublime Bodies: Frankenstein, Matilda, the Last Man,” *English* 55, no. 212 (2006): 142.

¹⁰⁷ Cited in Ryan, “The Physiological Sublime,” 267.

¹⁰⁸ Bewell, *Romanticism and Colonial Disease*, 311.

¹⁰⁹ Cited in *ibid.*, 207. Godwin writes there, for instance, that human life will reach a

herself from Percy and Godwin, as we see in Lionel's acceptance of the fate of humankind. There is no guaranteed progress, she thinks, so taking a Kantian approach to the pestilential sublime is fallacious and could actually run contrary to the strengthening of sympathies and "fellow-feeling" by way of xenophobia, nationalism, and military campaigns. Thus while Shelley supports the revolutionary, reform-seeking aspect of Percy's philosophy of disease and society, she does not seem to follow him to the point of seeing disease purely in social terms, in a way that denies there is anything natural about disease that allows for humans to ultimately forestall it.¹¹⁰

* * *

I have discussed the biopolitical function and problematics of the martial metaphor with respect to mobilizing the social, conducting populations and resources to make live and let die. In the narrative arc of Lionel's story, Shelley also touches on an affective dimension of the metaphor at the level of the individual. Midway through the novel, Lionel admits that the production of his narrative serves a medicinal purpose: "I had used this history as an opiate; while it described my beloved friends, fresh with life and glowing with hope, active assistants on the scene, I was soothed" (*LM*, 212). While we could read this as a use of the written word and memory to allay the finality of death, it can also contextualize a similar point the anonymous author-narrator makes when attempting to put together the text of the Sibylline leaves in the Italian cave. At the conclusion of the "Author's Introduction," the narrator writes,

My labours have cheered long hours of solitude, and taken me out of a world, which has averted its once benignant face from me, to one glowing with imagination and power. Will my readers ask how I could find solace from the narration of misery and woeful change? This is one of the mysteries of our nature, which holds full sway over me, and from whose influence I cannot escape. I confess, that I have not been unmoved by the development of the tale; and that I have been depressed, nay, agonized, at some parts of the recital, which I have faithfully transcribed from my materials. Yet such is human

point where there will be a "total extirpation of the infirmities in our nature."

¹¹⁰ *Ibid.*, 240.

nature, that the excitement of mind was dear to me, and that the imagination, painter of tempest and earthquake, or, worse, the stormy and ruin-fraught passions of man, softened my real sorrows and endless regrets, by clothing these fictitious ones in that ideality, which takes the mortal sting from pain. (*LM*, 4)

Shelley shows us that, as a cultural form propagated through literary genres, the martial metaphor works as a kind of anodyne. The fact that “human nature” is responsible for clothing fictions of catastrophe—sublime figures like the tempest consistent with the novel’s representation of disease—does not make the martial metaphor “natural.” Rather, it reveals one of its functions: “clothing” the existential crisis of death and disease in an “ideality, which takes the mortal sting from pain.” In other words, it is “natural” for us to try to soothe the pain of realizing that disease is neither inimical or evil, but just a process that need not be understood as a fight, for all that it is painful. The martial metaphor, in this capacity, imbues meaning by idealizing or romanticizing the encounter with, and the always ultimate “surrender” to, death. This narrative constructed by an individual ultimately serves biopolitical regulation, as it conducts the individual, in the disciplinary sense, to fight death and disease as an autonomous liberal subject. It gives meaning to life and health—life and health that can be harnessed at the level of the population.

If, as it was for Godwin, culture is a way to wage war against death, then Shelley articulates both the dangers and hopes associated with this function in terms of the martial metaphor and in terms of the progress of humanity that Godwin believed could overcome death, where the ever-increasing numbers of the dead—and their works—become an education for the living to improve humankind.¹¹¹ Moreover, as I have shown, culture can be used as a technology of the biopolitical, specifically in the deployment of the martial metaphor.

On the other hand, Shelley’s reduction of the human to the animal need not be read in only a pejorative sense. In this association lie her poetics of possibility, specifically a revisionist

¹¹¹ Strang, “Common Life,” 420.

strategy of rewriting the idea of community in categories of race, gender, and species.¹¹²

Moreover, Shelley promotes the material practice of vaccination as a way of embracing the pathologized other, in terms of both racial and special difference.¹¹³ In this sense, she shows a way to live with rather than against disease. In making the originally aggressively-written encounter with the “negro half clad” into the site of Lionel’s immunity, she challenges both the contagionist politics that quarantined foreign bodies and the anticontagionist sanitary imperatives that associated poor and foreign individuals with colonial filth.

Of course, vaccination itself was associated with the martial metaphor at the time, as I suggested earlier. We can read this contradiction in Shelley’s relationship with the metaphor as her reflection on the graduated and analog historical inflection of the metaphor in medical and literary discourse: for example, in the blurring of the disease etiologies of contagionism and antagonism, particularly the latter’s pre-nineteenth century genealogy. We can also read *The Last Man* as a dialectical reflection on the ethics and aesthetics of the martial metaphor: on the one hand, she challenges the metaphor by denaturing humankind’s bellicose relationship with disease and by revealing the way military thinking and practice catalyze rather than inhibit disease; on the other, she places the martial metaphor prominently in her narration and dialogue, which circulated the language to the reading public—especially significant given that less than decade later, “Asiatic cholera” did strike England. Thus, Shelley does not monolithically instruct on what literature can do for the material practices of medicine; rather, she reveals its martial and revolutionary possibilities.

¹¹² Wang, “We Must Live Elsewhere,” 240.

¹¹³ *Ibid.*, 472.

Chapter 2: “Never Say Die”: Charles Kingsley Meets Cholera Face-to-Face

Living in an uninfected country while working on *The Last Man* during the first cholera epidemic, Mary Shelley could reflect on the martial metaphor as a problematic tool of national identification while still critiquing the effects of military deployment. Three decades later, however, during the third cholera pandemic Britain’s position would make this ambivalence less tenable than in 1826. The rise of the sanitary movement during the middle of the nineteenth century pushed Britain toward a more affirmative stance on militarizing medicine.

It was during this period that the disciplines of epidemiology and public health first began to take shape through the efforts of such figures as Florence Nightingale, Edwin Chadwick, William Farr, and John Snow. One author in particular proved to be a major driving force for these developments, in a number of cultural registers, through his circulation of the martial metaphor. Charles Kingsley, a popular writer, Anglican priest, sanitary reformer, university professor, and sometimes Chartist sympathizer, was a key participant in the medico-scientific, military, literary, religious, and political discourses of the mid-nineteenth century; this put him in a unique position to use the martial metaphor to link these discourses together. Known for his interest in social reform and health, and mainly associated with the masculine strength and energy of “Muscular Christianity,”¹ he was also well-versed in sanitation and natural science in his professional life. Many of his novels, such as *Yeast* (1849), *Alton Locke* (1850), and *The Water Babies* (1863), feature themes of sanitation, health, and evolution in the context of reformist politics, a topic that has occupied much of the recent scholarship on his work. His post-Crimean condition-of-England novel *Two Years Ago* (1857) is especially relevant to that discussion. The construction of the martial metaphor is central to this novel, which is an extended reflection on

¹ See Donald E. Hall, *Muscular Christianity: Embodying the Victorian Age* (Cambridge [England]; New York: Cambridge University Press, 1994).

and promotion of thinking of medicine as a kind of war. The novel's themes link the other deployments of this metaphor across Kingsley's textual corpus.

Like Shelley, Kingsley was writing the martial metaphor at a critical moment in British military and medical history, close to the apex of the anticontagionist sanitary movement, the third cholera epidemic, and the Crimean War. Making direct connections between the sanitary movement's focus on cholera and Crimea, he develops the material connections between the military and medicine we saw in Shelley; however, instead of critiquing the linkage, he forges the metaphor as a necessary national ethos.

Some parts of Kingsley's body of work, however, do not appear congruous with others. Kingsley is often characterized as having complicated, if not paradoxical, politics. On the one hand, he espoused Carlylean heroics and masculine strength and virtue; on the other, he flirted with Chartism and Christian socialism. As I discuss later in the chapter, his ideas for the hygienic management of the population seem at once to empower all people, especially the working classes, to produce their own health, and to emphasize the role of middle-class professionals as the expert directors of the battle against epidemic disease and related sanitary problems. Kingsley's politics, however, as with his belief in science and his devout Christian faith, are not as incongruous as they appear. He flirted with changes in legislative privilege but remained committed to "an unshaken faith in the rightness of social order,"² a position that was not uncommon among middle-class liberals and radicals, especially those who were devout Christians and also embraced scientific progress and liberal politics.³ Kingsley was a complicated but not really contradictory figure; his apparent contradictions simply show how he brought

² Gilbert, *Cholera and Nation*, 157.

³ *Ibid.*

together seemingly opposed systems of thought for a single imperative. This is precisely how he developed the martial metaphor during the middle of the nineteenth century. The metaphor was ultimately a way for Kingsley to reconcile material biology and Christian theology and guide them to a productive social and liberal end.

The martial metaphor's recurrence in Kingsley's fiction, sermons, pamphlets, and lectures established him as a major actor in its propagation and contributed to the transmutation of the material convergence of medicine and the military into a figurative construction. Reading Kingsley in terms of medical and military history reveals how he develops the material nexus of medicine and the military in the emergence of the discipline of public health. Exactly how Kingsley mobilized this metaphor varied by genre and venue: the novel garnered the attention of the general public, while other texts provided a medico-military framework for specific populations. These include pamphlets addressed to soldiers in Crimea, sanitary lectures for middle-class females, and religious sermons for churchgoers. With the martial metaphor, Kingsley weaves the church, the domestic space, the battlefield, and the public sphere together in a biopolitical capacity.

Kingsley further uses the metaphor to deploy the logic of governmentality within the Christian framework of original sin.⁴ Though he was a devout Anglican minister, Kingsley's reconciliation of the material biology of disease, as he understood it, with his religious doctrine countered other, outdated religious positions that attributed epidemics purely to divine castigation. Earlier theocentric understandings of disease were not obviously compatible with the liberal subject's ability to shape the material conditions of his existence. While I am aware that

⁴ By *governmentality*, I mean the simultaneous care for and technology of the self in terms of conduct and that "ensemble formed by the institutions, procedures, analyses, reflections, calculations and tactics" that enable the exercise of biopower. Foucault, *Security*, 108.

“liberal subject” is a mobile category, I find Chris Otter’s definition is useful in this context: the “liberal subject” was the kind of person who was the target and presupposition of minimal state interference; who was “free and self-governing” while also “subjected and governed.”⁵ Kingsley capitalized on religious discourse to make health a moral and political duty of this liberal subject: he claimed that disease was not caused by God, in the manner of divine retribution, but resulted from original sin and must be fought against constantly, like sin itself. The martial metaphor empowered individuals to resist human spiritual and biological frailty while remaining subject to God’s natural laws and the state’s interest in public health. This subjectivity presupposed a middle-class, male individual who was afforded autonomous agency and had an entrepreneurial drive rooted in self-reliance, sobriety, discipline, and the other character traits espoused by John Stuart Mill and Samuel Smiles,⁶ who not coincidentally named health as a national trait.⁷ The work of individuals in shaping themselves to fight the concupiscent condition of the human soul became the means to forge a conductible and biologically healthy population.

Kingsley himself is often discussed in reference to sanitary reform, particularly regarding cholera. *Two Years Ago*, though not often the subject of extensive critical examination, is frequently cited in cholera histories. In medical history and literature, it has been cited as emblematic of the mid-Victorian zeitgeist of the cholera epidemics. For instance, Mary Wilson Carpenter opens her chapter on the history of cholera in the nineteenth century with an excerpt from *Two Years Ago* in which the disease is figured as Baalzabub, the Lord of the Flies.

⁵ *The Victorian Eye: A Political History of Light and Vision in Britain, 1800–1910* (Chicago: University of Chicago Press, 2008), 11.

⁶ See Stefan Collini, “The Idea of ‘Character’ in Victorian Political Thought,” *Transactions of the Royal Historical Society* 35 (1985).

⁷ Bruce Haley, *The Healthy Body and Victorian Culture* (Cambridge, MA: Harvard University Press, 1978), 207. See also Gilbert, *Cholera and Nation*.

Carpenter cites this as an emblematic example of the fear and disgust that the disease provoked in mid-century Britain.⁸ Christopher Hamlin, in his extended biography on cholera, cites Kingsley as an example of how cholera came to challenge fatalistic Christian beliefs about pestilence and the notion of infectious disease as a purely individual rather than communal failing.⁹ Keeping this scholarship in mind, this chapter focuses on how Kingsley specifically mobilized the martial metaphor through various media of publication and public speaking throughout his career as a clergyman, scholar, and sanitarian.

In *Two Years Ago*, Kingsley shifted notably into the condition-of-England genre¹⁰ in order to discuss the connections between war and medicine. What is missing from the existing scholarship on Kingsley and cholera is an account of how the metaphor of war was not only imbricated into medical discourse but also emerged from actual military efforts and institutions. In Kingsley's case, the Crimean War became a materially medical battle in which infectious disease was the primary killer; through this, he shifted into the metaphoric register of thinking about infectious disease an enemy within the public sphere. Kristine Swenson has touched on how war functions with respect to cholera, asserting that Kingsley's use of epidemic cholera in the novel is a metaphor for war.¹¹ While I agree, I suggest that subscribing to only this aspect of the metaphor—using sickness to allegorize a problematic state of society, such as war—erases the reality of how war, both as an idea and as an institution, influenced the development of medicine in concept and practice.

⁸ *Health, Medicine, and Society*, 33–34.

⁹ *Cholera*, ch. 2–3.

¹⁰ *Medical Women*, 37.

¹¹ *Ibid.*, 44.

More recently, Tina Young Choi has suggested that in *Two Years Ago*, while the disease is clearly represented as miasmatic, contagion structures the narrative logic, signaling the points of contact between individuals and forward-thinking narrative trajectories of traceable action and effect.¹² I agree, but would argue that the kind of inculcation, in terms of proposing a connection between self and other, and solidification between the effect and action of sanitary reform, must be addressed in terms of the structuring logic of war in the novel and Kingsley's other work. Because the unification of self and other works on the logic of Britishness and citizenry, we need to see the potentially divisive, violent, and coercive nature of the mechanism Kingsley uses to unify by suggesting that each individual is a potential actor affecting the bodily lives of others.¹³

Pamela Gilbert gives the most extensive discussion of Kingsley and cholera, devoting a chapter to Kingsley's participation in the discourses about cholera and nation-building as they relate to his constructions of gender and race. Drawing from much of the same material as I cite in this chapter, Gilbert reads Kingsley's understanding of biology and the politics of slavery in terms of early theories of degeneration and evolution. She demonstrates complex and seemingly contradictory positions in Kingsley's politics and theology and shows how his understanding of disease and nation operated in a Lamarckian framework. In Kingsley's paradigm, cholera and war are opportunities and shapers for the evolution of the self and the social body.

Though I agree with Gilbert that Kingsley recuperates Bichat's focus on the process of death as the opportunity for the tissue of an organism to regenerate,¹⁴ I suggest that this idea of evolution is nevertheless formulated martially. If war is a productive exercise and is imperative

¹² *Anonymous Connections*, 64–66.

¹³ *Ibid.*, 66

¹⁴ *Cholera and Nation*, 189.

for the maintenance of sovereignty, empire, and nation-building, the fight against disease becomes a productive biopolitical exercise of the self and the social body. War serves to expand or sustain the vitality of the social body by protecting it from foreign enemies or helping it accumulate resources and land, even at the risk and expected loss of portions of the population. The martial metaphor works analogously. An evolutionary process in which disease provides the opportunity to improve the nation and the individual is a violent one that entails a conquest both of disease and of the body's biologically concupiscent tendency toward death. The purpose of using the language of war in a metaphorical context, however, is producing in the subject a personal sense of agency and the capacity to act in the material plane of existence, rather than leaving the subject at the mercy of the wonders of the invisible world. This agency, I suggest, is conductible and allows the creation of a manageable national population—something that was precious capital for an expanding national power in the increasingly competitive world of the nineteenth century.

This chapter's reading of Kingsley's use of the martial metaphor extends the relationship between Kingsley and cholera to the larger epistemic formations that facilitate biopolitical governance. Through military logic and rhetoric, Kingsley strengthened the connection between the autonomous self and the regulation of the population. Examining this linkage brings his specific use of the metaphor to light in the context of Victorian literature's co-constitutive relationship with biopolitics. In what follows, I focus on Kingsley's participation in the medicalization of society by uncovering its roots in military medical concerns and showing how his rhetoric drew on this connection to yoke together individual and national health.

I begin by describing how cholera metaphorically and materially linked English citizens on the home front with the soldiers fighting in Crimea. I follow this by showing how Kingsley constructed gender to shape his arguments about the way different subjectivities are driven by the

martial metaphor: for him, masculinity follows a self-shaping imperative that is tempered by Christian values and a supportive, policing femininity; this leaves women as agents of the metaphor but never subjects of it in the same way as men. Kingsley empowers women to follow the disciplinary and militaristic techniques of Florence Nightingale, entreating wives and mothers to tame excesses of masculinity in addition to being vocationally devout agents of sanitary reform.

After addressing Kingsley's construction of gender in this context, I articulate how he saw disease as both a spiritual and a biological battle, first by challenging the notion that God deployed disease in a purely punitive capacity, and second by developing a notion of divine inspiration that acted as an agent against miasma, fortifying individuals against pestilent air—the cause and metonym of infectious disease for the sanitary movement. I conclude by suggesting that Kingsley was proposing the metaphor of medical war as a perpetual way of life when he linked his hygienic principles with his theological interpretations of biology, formulating a system in which subjects actively guard against death and disease by producing health. This cultural work had the effect not only of propagating the martial metaphor, but of leading to the very erasure of its construction, specifically its material connections to the military. Though I refer to Kingsley's lectures, sermons, and pamphlets, my argument is grounded in *Two Years Ago* because the novel brings together the military, medical, and theological from across Kingsley's textual corpus.

Threatening “Us” and “Ours”: Men Fighting Cholera at Home and Abroad

Kingsley drew on the unification of time and space between Crimea and London in order to imbue cholera's dramaturgical form with a sense of military urgency; fashioning cholera as a national enemy that threatened the citizens of England and their military forces simultaneously

would be a plot similar to the military romance in *Two Years Ago*. I follow Charles Rosenberg in suggesting that disease has a narrative and dramaturgical form that mobilizes communities to perform certain rituals that structure or “reaffirm social values and modes of understanding.”¹⁵ The number of deaths due to cholera and the ways they occurred were significant variables in this equation, but it was primarily the way cholera allied Londoners with soldiers in Crimea in the summer of 1854 that unified England’s home and Crimean fronts. The connections between medicine and war abroad created the conditions for a culture at home in which military infrastructure and the rhetoric of the military came to be implicit tenets of public health and medicine.

The relationship between the Crimean War and the cholera epidemic shown in *Two Years Ago* demonstrates the metaphor’s ability to circulate from military terminology to rhetorical use in the public imaginary. Published during the third cholera pandemic (1852–60) and at the end of the Crimean War, the novel tells the heroic narrative of Tom Thurnall, an adventure-seeking, self-made surgeon who finds himself shipwrecked at the Cornish town of ABERALVA. While attempting to make a living and support his father, he notes that the town’s poor sanitary conditions make it ripe for disease. The majority of the novel relays Tom’s fight against a local cholera epidemic that is concurrent with the Crimean War. In his attempts to overcome local recalcitrance regarding sanitary science, he becomes infatuated with Grace Harvey, a schoolteacher who later tames Tom’s obstinate self-reliance and atheism. Tom also reforms the inept aristocratic landlord and the meek and ineffective curate. The characters’ martial heroics occur offstage: Tom returns to war as a spy, while Grace goes to Sebastopol as a nurse with a number of other characters who join the war effort. While the novel does not describe the fighting in Crimea directly, the war

¹⁵ *Explaining Epidemics and Other Studies in the History of Medicine* (Cambridge; New York: Cambridge University Press, 1992), 279.

remains an underlying narrative force, reflecting how Kingsley obscures the material connections that link war to medicine by metaphor through literary form. By virtue of its plot and setting, *Two Years Ago* emblemizes how the literal war in Crimea provided a material grounding for the declaration of a figurative war on disease.

Britain's entry into the Crimean War resulted from the indirect threat posed by Russian imperial expansion. Originating in a religious dispute between Catholic and Eastern Orthodox Christians, the conflict that arose between France and Russia was largely a consequence of the decline of the Ottoman Empire.¹⁶ In July of 1853, Russia invaded Moldavia and Wallachia; Britain and France responded by joining forces with the Turks. Britain needed the buffer of an independent Turkey to secure the Mediterranean from Russian expansionism.¹⁷ From the first troop movements, however, it was clear to both sides that this was less a combative conflict than a medical war: as with most earlier wars, the overwhelming majority of casualties in Crimea fell to infectious diseases, including cholera, typhus, and dysentery.¹⁸ In fact, the British sustained devastating losses to cholera before the fighting even began. *The Lancet's* correspondent in Malta presaged the medical problems in Crimea by saying, "What we have most to fear in an encampment is an enemy that musket and bayonet cannot meet or repel. We have a fearful lesson in the records of the Russo-Turkish campaign of 1828–9, in which 80,000 men perished by 'plague, pestilence, and famine,' Let us have an overwhelming army of medical men to combat

¹⁶ It is worth noting that the Ottoman Empire was known as "the Sick man of Europe." Candan Badem, *The Ottoman Crimean War, 1853–1856* (Boston: Brill, 2010), 68.

¹⁷ David M. Goldfrank, *The Origins of the Crimean War* (London; New York: Longman, 1994), 49.

¹⁸ E. Fee and M. E. Garofalo, "Florence Nightingale and the Crimean War," *American Journal of Public Health* 100, no. 9 (2010): 1591.

with the disease.”¹⁹ It is no coincidence that this correspondent adopted a militarized rhetoric that resonates with Kingsley’s novel. The differences between this usage and Kingsley’s deployment of the martial metaphor, however, is Kingsley’s wider circulation and the way he brought the war home to the average citizen in his novels and his religious and sanitary writings. Moreover, his extended literary reflections connected this outbreak anxiety with the one on the home front, in contrast to the unitary focus of the military medical concerns of the author of *The Lancet* article.

Although one of Britain’s central motives for entering Crimea was to strike preemptively against Russian expansion, it was the encounter with disease that drew Kingsley’s attention. He used the medico-military battle in Crimea to shape how public health was understood in Victorian England. This connection is reflected in the opening lines of *Two Years Ago*, which look back on the events of the novel two years after they occurred: “Two years ago, while pestilence was hovering over us and ours; while the battle-roar was ringing in our ears; who had time to think, to ask what all that meant; to seek for the deep lesson which we knew must lie beneath?”²⁰ The simultaneity of the pestilence and the battle roar connects the war abroad with the medical war in England. The miasmatic cloud hovering over “us and ours” alike speaks to those at home and their soldiers. Through a metonymic relationship of contiguity, these two groups remain one social body at the mercy of the same assailing pestilence.

To help the military effort, Kingsley wrote pamphlets to be delivered to soldiers for inspiration. These were collected and published in 1888 as *True Words for Brave Men*. To the men fighting for their lives against an unseen enemy, Kingsley writes, “Above all, you have felt how difficult it was to die, not fighting sword in hand, but slowly and idly, and helplessly, by

¹⁹ “The War: Naval and Military Intelligence,” *The Lancet* 63, no. 1599 (1854): 461.

²⁰ Charles Kingsley, *Two Years Ago* (London: Collins Clear Type Press, 1903), 1. Hereafter cited in the text as *TY*.

cholera or fever.”²¹ Speaking to them as a social body, he urges individual soldiers to fight against both disease and enemy combatants.

While writing these pamphlets, Kingsley also published a collection of his sermons from 1848 and 1849, “Who Causes Pestilence?” (1854). The benefit of publishing sermons was, as Francis Kiel observes, that clergymen could increase opportunities for further learning and reach an audience that was unable to be present at the original sermon; additionally, they could at least attempt to authentically recapture and memorialize the particular historical moment and context of the sermon, whether that context was an event, a series of events, a place, or a person.²²

Recapturing a moment was precisely Kingsley’s purpose in publishing his cholera sermons. He reintroduced the context of the cholera epidemic of the 1830s and late ’40s into the epidemic of the late ’50s. Consequently, his sermons, which otherwise would have been heard only once, had a cumulative effect in shaping public perception of cholera. He made the point that cholera had struck before and would strike again. Not only did this kind of publication give Kingsley a position of authority to speak from in the 1850s, and even more so during the epidemic of the 1860s, it also redeployed the fear caused by the previous epidemics in a new context.

This redefinition of cholera as a perpetual threat, an endemic of epidemics, as I discuss in the final section of this chapter, codified a mode of epidemiological thinking and biopolitical practice that sought not only to act against epidemics when they struck but to fight them perpetually by understanding disease as a permanent presence rather than a periodic or singular punishment from God. By addressing the British public through his fiction and sermons and

²¹ Charles Kingsley, *True Words for Brave Men* (London: Keegan Paul, Trench and Co., 1888), 202.

²² “Sermons: Themes and Developments,” in *The Oxford Handbook of the British Sermon, 1689–1901*, eds. Keith A. Francis and William Gibson (Oxford: Oxford University Press, 2012), 39, 41.

writing to the troops in Crimea through inspirational pamphlets at approximately the same time as the public was experiencing cholera and learning of its effects in Crimea, Kingsley helped construct the cultural logic through which, in the mid-century, the practice of medicine came to be seen as a war.

Beyond the symptomology of cholera and its genealogy in pre-nineteenth-century disease theory that we saw in Shelley, at this point in time cholera had a number of unique characteristics that helped Kingsley codify public health and medical discourse in military terms—specifically, to identify the disease’s foreignness as a part of its threat to Britain. In the nineteenth century, Britain had four major outbreaks of cholera (1832, 1841, 1854, and 1866), making it a looming threat to the country throughout the century. Cholera is a “disease of society,” thriving on urbanization and high population density, and travels with crowds,²³ replicating its 1817 spread through India after the 1830s in England. These qualities made the British Empire a prime target for cholera epidemics. As we saw in the previous chapter, cholera arrived in Western India in 1818, coinciding with the British defeat of a hill station south of Bombay and the expansion of British rule over the country. As the British consolidated their control over India, the troops carried cholera across the empire; it was then spread by commercial shipping and the soldiers returning home.²⁴ The fact that it came from the East and afflicted British troops was often sufficient reason to identify “Asiatic cholera” with foreign military threats in a number of medical and periodical texts of the late 1830s and ’40s.²⁵ While a critical reading of Shelley’s *Last Man* suggests taking pause before adopting this position, it is clear that the recurrent use of the

²³ Carpenter, *Health, Medicine, and Society*, 35–6.

²⁴ *Ibid.*, 38.

²⁵ For example, see Nathanael Alcock, *A Treatise on Cholera* (London: John Churchill, 1844).

metaphor at once operated as a kind of sign of the times, reflecting the anxieties of the moment, and itself probably fostered that kind of thinking in the wake of the 1831 epidemic.

The two cholera epidemics from before the mid-century that Kingsley was responding to had helped cholera seem rhetorically analogous to a military invasion. In this capacity, the non-Britishness of cholera constructed the disease as a foreign enemy that did not respect national boundaries and spread globally, a characteristic that Mary Wilson Carpenter identifies with its cosmopolitan nature.²⁶ This logic is present in medical texts contemporaneous with Kingsley's use of the metaphor, as in *A Treatise on Fever* (1861) by Robert Spencer Dyer Lyons, the former pathologist-in-chief to the British army in Crimea. Speaking about infectious "fevers" more broadly and having already touched on the deaths by cholera in Crimea, Lyons addresses medical students on their noble military missions:

Should your avocations be exercised in other lands, whether as public servants in any of the distant colonies or broad possessions of the British empire, or as adventurers seeking new homes and fortunes in the far west, your knowledge and your skill will be ever taxed in every clime and amongst every race, to stay the destroying hand of this universal enemy of our kind. For in some one or other of its forms, this cosmopolitan disease meets you in both hemispheres, and on either side of the line.²⁷

He continues, "If you wish to be worthy of your high mission, and equal to the responsibilities of your calling, you must be prepared, with all the resources of your art, to meet this deadly antagonist face to face, and to dispute with him each inch of ground."²⁸ This draws on a hypernym of the martial metaphor: close, face-to-face combat, a figuration that is also present in

²⁶ See also Catherine Hall, who contends that "Kingsley scorned cosmopolitanism." "Men and Their Histories: Civilizing Subjects," *History Workshop Journal*, no. 52 (2001): 60.

²⁷ Not coincidentally, Lyons draws heavily from and quotes Thomas Sydenham, who, as I mentioned in the introduction, is one of the earliest users of the martial metaphor. Robert Dyer Lyons, *A Treatise Fever or Selections from a Course of Lectures on Fever Being Part of a Course of Theory and Practice of Medicine* (London: Longman, Green, Longman, and Roberts, 1861).

²⁸ *Ibid.*, 7.

Two Years Ago, except that in its nationalist framework, the threat is directed more specifically at the British than at humankind generally. Moreover, the protagonist of the novel is an adventurer who has seen the effects of disease, especially cholera, all over the world, much like the medical soldiers Lyons addresses. Even in the context of a call to arms against disease, this qualification identifies war as an instigator of disease along the same lines as *The Last Man*. Lyons also writes,

It is only for the vulgar and the uninformed that war exhibits its greatest terrors on the battle-field. The medical history of every great campaign that the world has seen, tells us that the most murderous inventions which military science has produced, from the remotest times to the present, reap but a small harvest of death when compared with the long black list of mortality which the rolls of disease furnish in such fatal abundance.²⁹

Thus, Lyons' deployment of the metaphor in opposition to an explication of the actual material connections followed Kingsley's own deployment of cholera as a foreign enemy. Cholera's "foreignness" abetted Kingsley's general rejection of cosmopolitanism, which stood in contrast to his ideal of a pure and developed British national culture.³⁰ Kingsley's propagation of this social construction of the disease helped to occlude Britain's complicity in the pandemic that spread early in the century and redirected attention to cholera as an inimical force, positioning it as something that both the military and the public had to fight against, rather than considering military infrastructure and movement to be one of its vectors. This was especially important during the Crimean War, a campaign the general public had more access to and knowledge of than any before.

Live war reporting about the conditions of sanitation on the battlefield allowed the public to make the connections Kingsley was drawing for them, between the cholera epidemic in Crimea and the contemporaneous one in Britain. Crimea was the first war to utilize both the telegraph and

²⁹ *Ibid.*, 8.

³⁰ C. J. Wan-ling Wee, *Culture, Empire, and the Question of Being Modern* (Lanham, MD: Lexington Books, 2003), 8.

the photograph, giving the public access to live and visual information at a speed that was previously unavailable. Swenson has suggested, furthermore, that conflating the cholera epidemics in Crimea and at home would have felt natural to the Victorians when they looked back on 1854.³¹ Although the third cholera epidemic had a lower overall mortality rate than the second, the 1850–62 epidemic included the Broad Street outbreak, which killed more than 500 people in 10 days.³² This was the outbreak that John Snow famously tracked to a water supply that had been contaminated by a nearby cesspool,³³ contradicting the miasmist view that disease was transmitted by foul air emanating from decaying matter but still linking the disease to excrement. Snow later speculated that the spread of diseases like cholera and typhoid in Crimea must be caused by similarly contaminated water supplies.³⁴ Not long afterward, this was proven to be the case.³⁵ These connections highlighted the importance of military imperialism to the conquest of cholera in the metropole, an attitude from which Kingsley’s use of the martial metaphor emerged.

The deaths caused by cholera in Crimea compounded the public’s fear of the disease and came to shape the way medicine would seek not only to ameliorate but to actively *fight* the

³¹ *Medical Women*, 44.

³² Carpenter, *Health, Medicine, and Society*, 17.

³³ *On the Mode of Communication of Cholera* (London: John Churchill, 1855), 26.

³⁴ “On the Chief Cause of the Recent Sickness and Mortality in the Crimea,” *Medical Times and Gazette*, May 12 1855, 457.

³⁵ While Snow published the waterborne theory in 1854, it took several years for it to be fully appreciated and accepted. Without mentioning Snow, Kingsley does acknowledge the waterborne theory later in the century, as evidenced in his 1866 lecture on cholera. He lays blame not on the poor themselves but on “those who supply poisoned water, and foul dwellings.” Charles Kingsley, “Cholera, 1866,” in *The Water of Life and Other Sermons* (London: Macmillan, 1879), 190.

disease, which meant searching for the disease's proximate and ultimate causes. After Snow's landmark publication, a similar find was made by the Sanitary Commission at the British camp at Sebastopol, where it was discovered that the main hospital had been built directly over a cesspool.³⁶ Furthermore, cholera's link to the war fostered the same kinds of anxieties about it that an event like a major military conflict would have caused. In this way, epidemic threats enabled the martial metaphor to become an endemic logic of medicine and politics, challenging certain configurations within the social order.

Kingsley addresses a number of national and military failures that the war brought to light. In his works, the martial metaphor becomes a tool for correcting these failures as they pertain to national health. Most notable of these was the problematic commissary system in the British military. The existing system of military commissions allowed aristocrats to purchase ranks in the form of promissory bonds. As has been well-documented and argued, this system led to inept and inexperienced officers making catastrophic strategic blunders³⁷ and prompting events such as the highly mythologized Charge of the Light Brigade. Such problems with the ruling class suggested that a redefinition of national heroes was in order. Nevertheless, attempts were still made to elevate the actions of the officers in the war to heroism. Joseph Peck suggests that A. W. Kinglake's eight-volume *The Invasion of Crimea* (1863–87) recalls the end of the *Iliad*, insofar as the “hero”—Lord Ragland, the commander of the British forces—dies at the end of a long siege.³⁸ This reference to the Greeks as a model for Britons is significant because, as scholars such as Richard Jenkyns have noted, it was a frequently invoked paradigm for Victorians

³⁶ Swenson, *Medical Women*, 36, n39.

³⁷ Orlando Figes, *The Crimean War: A History* (New York: Metropolitan Books, 2010), 468.

³⁸ *War, the Army, and Victorian Literature* (New York: St. Martin's Press, 1998), 27.

throughout the nineteenth century.³⁹ Kingsley himself adopted Greek tropes in conveying his notions of proper masculine, heroic conduct by comparing Tom Thurnall to Ulysses,⁴⁰ in essence, fitting medicine into the paradigm of masculinity by way of heroics. Kingsley also, however, adopted the prevalent disillusionment with the aristocracy into his martial medical rhetoric and explanations for the condition of England. According to Kingsley, the country needed self-disciplined men who had been hardened by self-fashioning to challenge a system in which indolent aristocrats shaped the nation's military, political, and economic realities and led to problems such as unsanitary conditions for the laboring class (a problem that affected all classes). According to Kingsley, the country needed men like Tom Thurnall. In contrast to the decaying system in which the aristocracy controlled the population through landed privilege, the rise of the middle class would result in strong men who could better their own condition and, subsequently, the nation's—brave men who could intervene in personal and public health.

In *Two Years Ago*, Kingsley links the mismanagement of enlisted men with the aristocracy's irresponsible sanitary management of the laboring population, framing this through the lens of war and disease. Correcting this problem became a part of the war against disease because it was a part of Britain's military reform. Tom, for instance, presages the onset of cholera as soon as he arrives in Abergalva. He tries to preempt the disease by instituting sanitary reforms that entail completely rebuilding the local cottages. The local aristocrat and absentee landlord, Lord Scoutbush, is initially too weak to help. Tom's attempts to work with him are forestalled by Scoutbush's alcoholic squire Trebooze and his recalcitrant steward Tardew, who aggressively

³⁹ *The Victorians and Ancient Greece* (Cambridge, MA: Harvard University Press, 1980), 16.

⁴⁰ Kingsley references the Greeks in a number of lectures with respect to proper physical development. In contrast, he at times identifies Rome with decadence and disease, consistent with general Victorian sentiment.

resist Tom's demands that the cottages receive proper drainage and architectural repair. Scoutbush puts on "an air of languid nonchalance which is considered (*or was before the little experiences in Crimea*) proper to a gentleman of his rank and fashion" (*TY*, 135, emphasis added). The parenthetical reference speaks to the fact that the military failures of the aristocracy were at least partially due to a masculinity that was not tempered by military hardship and self-fashioning. Scoutbush is not an evil man, just weak and full of untapped potential: "And all the while there was a quaint and pathetic consciousness in the little man's heart that he was meant for something better; that he was no fool, and was not intended to be one" (*TY*, 131). This is an example of Kingsley's liberal reformist politics working with rather than against larger social structures such as class division. Scoutbush requires a model of masculinity in order to better himself and the community; enter Tom Thurnall.

For Kingsley, it was the heroes like Tom Thurnall who could save the nation in the face of foreign and domestic enemies like armies and disease. Surgeons like Tom needed to take political action, to perform scientific work in line with John Snow's in order to better the public understanding of the nature of disease, and to fight individual cases of cholera in the bodies of the infected. Tom performs all three of these functions in the novel by writing to the Poor Law boards, confronting aristocratic landlords, examining water specimens, and performing individual medical interventions. Men like Snow, Chadwick, and Farr helped to ensure the sanitary, sewage, architectural, and legal reforms that gave doctors and the state some control over disease. Here, however, the policing of the poor was central to the formation of a middle-class authority and the stabilization of its place within the social and political landscape of the mid-nineteenth century, as Priti Joshi suggests in her interpretation of Chadwick's own self-fashioning.⁴¹ It has even been

⁴¹ Joshi contends that, by distinguishing himself from the aristocracy's distancing of themselves from the poor while employing expertise pertaining to the regulation of the poor, the middle-class male fashioned himself through a triangulated relationality. "Edwin Chadwick's

suggested that Chadwick was the prototype for Tom Thurnall.⁴² In this way, the implicitly male liberal subject was at the center of the metaphorization of medicine as a military enterprise. Through strength, discipline, and willpower, this subject would drive medicine to resist the ever-growing threat of disease that accompanied the expansion of Britain's industry, urbanization, and empire.

Related to his male, liberal subjectivity is the affirmation of Tom's socioeconomic status, speaking to the ways the class structures within liberalism are necessary for the martial metaphor to function. Kingsley linked economics and the martial metaphor in his sermon at St. George's hospital, "The Physician's Calling" (1866):

Experience has decided, that in a civilized Christian country . . . the great principle of the division of labour should be carried out: that there should be in the land a body of men whose whole mind and time should be devoted to one part only of our Lord's work – the battle with disease and death. And the effect has not been to lower but to raise the medical profession.⁴³

While the state of class relations remained a national problem for Kingsley, he nevertheless validated the economic system that allowed medical professionals to develop their expertise and, in effect, better themselves and society. This kind of reform within existing class politics is a topic he returned to when discussing the proper role of the female in society. In the above sermon, however, as in *Two Year Ago*, Kingsley constructs the middle-class medical professional as a hero of central, national importance. His account of the "rise of the medical profession,"

Self-Fashioning: Professionalism, Masculinity, and the Victorian Poor," *Victorian Literature and Culture* 32, no. 02 (2004): 358.

⁴² Gilbert Slater, *The Making of Modern England* (Boston: Houghton Mifflin Company, 1913), 143.

⁴³ Charles Kingsley, "Physician's Calling," in *The Water of Life and Other Sermons* (London: Macmillan, 1879), 17. Hereafter cited in the text as *PC*.

certainly concurrent with the passing of the Medical Act of 1858,⁴⁴ fits within his rhetoric of the rise of the middle-class professional expert who would direct the nation in the face of perpetual biological threats. The doctor, in Kingsley's doctrine, not only serves to direct medico-political action, but servers as a role model for social betterment through self-fashioning. An example of this is when Tom helps Scoutbush perform his upper-class duties in the division of labor. Therefore, Kingsley subscribed to liberalism for the betterment of England in medical and political terms.

Tom epitomizes self-discipline and courage, remaining physically and mentally strong in the face of disease and war, which in the novel function as trials and as opportunities for hardening masculine traits. He survives cholera (twice), bullet wounds, bayonetting, shipwrecks (three times), and even hanging, and he frequently advocates for exercise as a corrective measure (*TY*, 96). Tom's intelligence highlights his medical training. His medical credentials appear as a paratactical bombardment of military, colonial, and governmental practices, contrasting him with the local, alcoholic surgeon:

F.R.C.S. London, Paris, and Glasgow . . . Have been medical officer to a poor-law union, and to a Brazilian man-of-war. Have seen three choleras, two army fevers, and yellow-jack without end. Have doctored gunshot wounds in the two Texan wars, in one Paris revolution, and in the Schleswig-Holstein row; beside accident practice in every country from California to China, and round the world and back again. (*TY*, 89)

Tom has been professionally molded by both war and medicine. Furthermore, his background embodies the martial metaphor because his life is dedicated to forestalling death, in both himself

⁴⁴ The Medical Act of 1858 essentially served to distinguished "qualified" professionals from "non-qualified" professionals by creating a list of vetted practitioners and professional standards. Although the act had many problems and did not actually criminalize quackery, and its history has been widely debated, it did serve as an emblem of the period in which the medical establishment gained a social and professional status it had not previously enjoyed. See M. J. D. Roberts, "The Politics of Professionalization: Mps, Medical Men, and the 1858 Medical Act," *Medical History* 53, no. 1 (2009).

and others. He literally “never say[s] die.”⁴⁵ Kingsley’s formation of a masculine subject makes Tom an emblem for the intersection of medicine and war. In Kingsley’s rhetoric, medicine, like war, shapes individuals and nations by making them more resilient against future threats.

Tom’s medical training speaks to the cutting-edge medical epistemes of the nineteenth century, changes in thought that facilitated the metaphor’s emergence into popular and medical discourse. Although Kingsley cites numerous examples in which Tom practices military medicine, the character’s history links him with the paradigm of medicine as war in a historical, genealogical and an epistemological capacity. Identifying Tom with Paris connects him, much like *Middlemarch*’s Lydgate, to Bichat’s pathological anatomy, wherein emphasis is placed on practical medical training via dissection and practice is grounded in the body rather than in theoretical nosology. This nosology aligned itself with older medical paradigms like those practiced by the conservative medical professionals of Oxford and Cambridge. Tom’s practical training is further highlighted by his title from the Royal College of Surgeons (FRCS) and his training in Scotland. Scotland was a premier site for surgical training in Britain, especially for surgeons who would perform military service, beginning at the turn of the nineteenth century.⁴⁶ Furthermore, the fact that Tom is neither an officer nor a gentleman physician but a non-commissioned mercenary surgeon underscores his individualism and his professional and social self-fashioning. He operates under his own imperative to fight and cure wherever he is needed for the purpose of bettering his economic status. This social positioning identifies him with what Michael Brown, using Kingsley’s novel as an example, has argued was a rhetorical move by mid-

⁴⁵ The phrase predates the novel, originating in John Howell and Michael Scott’s military *The Man-of-War’s Man* (1833).

⁴⁶ See Catherine Kelly, *War and the Militarization of British Army Medicine, 1793–1830* (London: Pickering & Chatto, 2011).

century surgeons to identify themselves with masculine military heroism in public speeches, medical tracts, and eulogies in order to depose medical elitists; their goal was to win authority and recognition for themselves and earn the right to regulate their own profession.⁴⁷ The appropriation of military heroism by middle-class general practitioners, surgeons, Poor Law physicians, and district medical officers was carried out in opposition to the complacent medical aristocracy and the ineffectual military hierarchy in Crimea.⁴⁸ Tom's professional development, furthermore, aligns with the belief that the power to enact social change lies in the middle class. This notion borrowed from the influence of military discourse on the rise of medicine as a profession in terms of social standing. In addition, this professional assignment, which draws from and contributes to the martial metaphor, suggests that militarized, medical masculinity fostered the entrepreneurial relationship between the practitioner's own talents and social mobility while also aiding in medical and social reform.

Tom's cutting-edge medical training links him with the then-prominent liberal medical theories of disease transmission and their respective political stakes. As a sanitarian in alliance with Florence Nightingale, Kingsley furthered the anticontagionist agenda, which operated under social reforms based on miasmist understandings of disease rather than contagion theory.

By linking Tom with sanitarians, Kingsley makes him specifically British and liberal, contrasting his activity not only with conservative politics but with the literal and overt use of military force on civilian populations through the oppressive quarantines, inspections, and restrictions on freedom that Russia instituted during the 1830s cholera epidemic,⁴⁹ following the

⁴⁷ "'Like a Devoted Army': Medicine, Heroic Masculinity, and the Military Paradigm in Victorian Britain," *Journal of British Studies* 49, no. 03 (2010): 595.

⁴⁸ *Ibid.*, 595, 629.

⁴⁹ Hamlin, *Cholera*, 106–8.

more conservative contagionist paradigm. This relationship fits with the metaphoric relationship between medicine and war in *Two Years Ago*. Militarily, Tom does not partake in direct combat; he goes to the East as spy and contributes to the war effort with information and surveillance rather than overt force. Medically, he does not expel or contain the sick. Sanitary reform operated through informational, structural, and political mechanisms rather than direct containment of infected populations, although the militaristic exercise of force in this situation was always a possibility. In this relation, we see how the repressive and juridical force of the martial quarantine works behind the scenes of regulatory biopolitics, allowing the martial metaphor to work covertly, occluding its military origins and tactics and its own metaphorical nature. I develop this idea more in the chapter that follows on *Dracula*, but for the moment I want to extend my discussion of Tom's self-fashioning to Kingsley's medical politics with respect to gender.

Wars and disease serve as trials for Kingsley's ideally masculine men so that they can fashion themselves to greater ends beyond themselves. Before arriving at Abergava, however, Tom was purely self-driven, meaning that he did not recognize a higher power or the limits of his own capabilities: "There were few things he could not invent, and perhaps nothing he could not endure . . . a man who stood alone in and self-poised in the midst of the universe" (*TY*, 46). Although Tom relays that he has served as a surgeon for the Poor Law, aligning him with the disciplinary apparatuses that led to the medicalization of British society, he lacks the drive to directly serve national interests. The cholera epidemic and Grace's inculcation of a belief in God help Tom to maintain strong self-will, but to do so in a fashion that is productive for the individual and the social body.⁵⁰ Because of these influences, Tom ends up being more righteous and more capable of fighting disease for the English. Further, the way in which Tom reconciles

⁵⁰ Gilbert, *Cholera and Nation*, 175–6.

his secular liberal subjectivity and belief in the material etiology of disease bespeaks how Kingsley's views on the biological war against disease fit logically into his Christian belief system.

In the novel, the only hope for reforming the undisciplined aristocrats' failed masculinity is proper military service. The local aristocrat, Scoutbush, is in the military as a guardsman but is too meek to do anything militaristic. It is not until he falls for the American Sabina that his desire for military prowess is enlivened, as he learns that she "will not marry anyone who will not devote himself, and all he has, to some great, chivalrous heroic enterprise" (*TY*, 142). Scoutbush's lack of proper military masculinity emphasizes concerns similar to those of the British medical establishment before and during the Crimean conflict. The author of the previously cited *Lancet* article writes, "Do not let our soldiers be killed by antiquated imbecility. Do not hand them over to the mercies of ignorant etiquette and *effete* seniority."⁵¹ England needed more masculine military heroes, not weak aristocrats. And after learning of Sabina's standards, Scoutbush is a changed man: "He read of nothing but sieges and stockades, brigade evolutions, and conical bullets; he drilled his men till he was an abomination in their eyes, and a weariness to their flesh. . . . So in all things he acquitted himself as a model officer, and excited the admiration and respect of Sergeant-Major MacArthur" (*TY*, 144). After he is reformed, the fight against cholera allows Scoutbush to become a soldier in the medical war. In addition, Major Campbell, a central mentor figure in the novel who is also self-made through military service,⁵² empowers Scoutbush to sever his ties with the lofty, aloof, incapable aristocracy: "Your life has been child's play as of yet. You are now going to see life in earnest—the sort of life average people have been living." Ultimately,

⁵¹ "The War: Naval and Military Intelligence," 460.

⁵² Gilbert, *Cholera and Nation*, 163.

Scoutbush becomes “afraid of nothing,” only wishing that “one could meet cholera face to face, as one does with those Russians” (*TY*, 351). This is the same phrasing that was present in Lyons’ address to the medical students who would face disease in the British colonies and territories. To this same effect, Scoutbush appropriates the martial metaphor to fashion himself as a proper man and a defender of the nation, both medically and martially.

This militaristic reformation conveys Kingsley’s views on gender vis-à-vis self-reliant subjectivity, medicine, and the disciplinary techniques that emerge from the relationship between the three. In Kingsley’s paradigm, the militarization of medicine required the distinction of gender roles in order to mobilize the resources under each gender’s jurisdiction most effectively. Within the scope of the martial metaphor, Kingsley defines gender this way: as men tackle the public sphere and the ability to self-fashion, women take on the domestic sphere and the role of maternal superintendents.

Mothers, Wives, and Nurses: Requisite Ancillary Support in the Medico-Military War

Kingsley associates the martial metaphor’s imperative for national health with the domestic through his writing of the female gender, capitalizing on existing gender scripts to translate military nursing into domestic hygienic management. The Crimean War was the origin of a recurring relationship between females and the military: the repositioning of the supportive wife as nurse. This role was literal in many cases as at the end of *Two Years Ago*, but I use the term *supportive wife* here to underscore the accommodating nature of women’s participation in the production of health for the state through the domestic sphere. As such, women figuratively married the paternal directives of public health as instruments of the metaphor rather than liberal

subjects. Florence Nightingale and the more recently appreciated Mary Seacole⁵³ were instrumental in the creation of “modern” professional hospital nursing, which is often identified as emerging from the Crimean War.⁵⁴ Nurses’ efforts were not just influential in one-on-one patient care and the development of nursing as a revered profession, in contrast to the caricature of nurses as drunks in the early Victorian period: they were also profoundly influential in the mid-nineteenth century creation of public health through the sanitary movement. Like Farr, Chadwick, and Snow, Nightingale utilized the developing science of statistics to help solidify the field of epidemiology; she also wrote extensively about sanitary conditions. Her *Notes on Matters Affecting the Health, Efficiency and Hospital Administration of the British Army* (1858) had numerous tables and graphical coxcombs,⁵⁵ the most notable being her “Diagram of Causes of Mortality of the Army in the East.”⁵⁶ The use of statistics to tabulate disease causalities would rhetorically make mass death appear as a figure similar to that of combat casualties. To fight the cause of these causalities, Nightingale emerged as a domestic, middle-class professional who used military-style discipline and domestic surveillance to police filth and bodies.

For Kingsley, Nightingale served primarily as a model of the female agent on whom the martial metaphor relied for the dissemination of sanitary discourse and its management within the

⁵³ See, for example, Jessica Howell, “Mrs. Seacole Prescribes Hybridity: Constitutional and Maternal Rhetoric in Wonderful Adventures of Mrs. Seacole in Many Lands,” *Victorian Literature and Culture* 38, no. 01 (2010).

⁵⁴ It is worth noting here that Sarah Helmstadter has recently challenged the Nightingale paradigm, contending that the development of modern nursing was a more protracted process that began early in the century with the rise of scientific medicine. She also attributes many mid-nineteenth century nursing techniques to the Anglican sisterhood. *Nursing before Nightingale, 1815–1899* (Farnham: Ashgate, 2011), 123.

⁵⁵ Polar graphical representations of data.

⁵⁶ Lynn McDonald, “Florence Nightingale, Statistics and the Crimean War,” *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 177, no. 3 (2014): 569–71.

family and the hospital. Kingsley praised her for modeling the role of the female gender. Modeling Grace's vocational passion and discipline after Nightingale allowed Kingsley to solidify the female supportive agent's part in the production of the martial metaphor in his novel. One reviewer praised it for "the sensible way in which [Kingsley] has spoken of marriage life. . . . He uses the story as a means to convey instruction in a popular and impressive form. . . . Mr. Kingsley has a just and delicate appreciation of woman's nature, and has nobly expressed his reverence for her weakness and admiration for strength."⁵⁷ In other words, the novel instructed the female agent of the martial metaphor how to act and showed the male subject what to look for in a wife.

The Nightingale figure that Kingsley adopts functions as a necessary link between military medicine and civilian medicine's adoption of military rhetoric and logic. As a number of scholars have argued, Florence Nightingale was a cultural icon.⁵⁸ As such, she was the point of articulation for how the idea of medicine as war became a structuring force of biopolitical discipline and regulation in the mid-Victorian period via the intersections of medicine and the family. Considering Nightingale's military experience, the disciplinary techniques that she inculcated in nurses, and the role that discipline played in the hygienic protocols that allowed liberal subjects to become sanitary, we can see how the female supportive agent became a crucial element of biopolitical regulation. Florence Nightingale does, however, embody a contradiction: she was, first, the normative definition of middle-class domesticity, a self-denying caretaker;

⁵⁷ "Two Years Ago by Charles Kingsley," *The British Foreign and Evangelical Review* 7, no. 13 (1858): 414.

⁵⁸ See Swenson, *Medical Women*; Mary Poovey, *Uneven Developments: The Ideological Work of Gender in Mid-Victorian England* (Chicago: University of Chicago Press, 1988); Swenson; and Louise Penner, *Victorian Medicine and Social Reform: Florence Nightingale among the Novelists* (New York: Palgrave Macmillan, 2010).

second, however, she was masculine “like a politician or soldier,” encountering opposition only to persevere and overcome it.⁵⁹ However contradictory it was, this ideal served as a conduit for Kingsley’s introduction of martial rhetoric into medicine for a female audience who would come to play an instrumental role in the mobilization of the martial metaphor; it at once empowered, relegated, and regulated them.

Kingsley’s ideal female was necessary to the production of proper individual masculinity and the cohesion of Britain’s social body in the face of threats to public health. In a biblically allegorical description of the unproductive relationships between the socioeconomic classes, Kingsley praises Florence Nightingale as one of the women who could make the laboring classes work symbolically with the upper classes. Comparing England to the biblical Jacob and Esau, the former representing the middle and upper classes and the latter the working class, Kingsley suggests that a “gulf” lies between them: “But on Esau in general—on poor rough Esau, who sails Jacob’s ships, digs Jacob’s mines, founds Jacob’s colonies, pours out his blood for him in those wars which Jacob has stirred up, while his sleeping brother sits at home, enjoying at once the ‘means of grace’ and the produce of Esau’s labor.”⁶⁰ Kingsley qualifies and suggests attenuation for this inequality:

Esau has a birthright . . . but it is not . . . any *man* at all, who can tell Esau the whole truth about himself, his powers, his duty, and his God. Woman must do it, and not man. His mother, his sister the maid whom he may love. . . . As long as England can produce two such woman as Florence Nightingale and Catherine Marsh, there is good hope that Esau will not be defrauded of his birthright; and that by the time that Jacob comes crouching to him, to defend him against the enemies who are here at hand. . . .⁶¹

⁵⁹ Poovey, *Uneven Developments*, 169.

⁶⁰ “Preface to the Fourth Edition,” in *The Works of Charles Kingsley* (Philadelphia: John D. Morris and Company, 1889), xv–xvi. The cited preface is dated February 7, 1856.

⁶¹ *Ibid.*, xvi. Catherine Marsh was a well-known philanthropist who devoted herself to the poor both financially and through biblical education. She also cared for many of the sick and dying during the third and fourth cholera epidemics. Marsh also illustrates the intersections of medicine and war in terms of class and Christianity à la Kingsley. In addition to her nursing

In this system, women serve as conduits allowing the upper and middle classes to collaborate with the working class to “defend” against the enemies, like disease, that are in Jacob’s midst: the middle-class female must help to clean up the homes of the poor and serve as a role model of proper sanitation practices for the middle and working classes. Middle-class women also, in this paradigm, help men regulate the lower classes and avoid the inefficacy displayed by the aristocracy in *Two Years Ago*. This role speaks to the imperative of the middle class to doctor the social body, not only because surgeons like Tom came from the middle class, but because, in the text, the working classes do not actually do much. Their cottages are repaired for them, and they tend to blindly follow the Methodist preacher who attributes cholera to God’s wrath, a mistake that Tom takes pains to correct. We do not see or hear much from the working class directly in the novel. This absence reveals the contradiction between the rhetoric and the logic of Kingsley’s reformism with respect to class. The poor are constructed rhetorically to be liberal subjects and are included in the abstraction of the whole social body: “We must teach men to mend their own matters, of their own reason, and of their own will.”⁶² However, in the domestic component of the martial metaphor, the goal, planning, and regulation of this instruction are managed by the middle-class professional and policed by his supportive wife. In this model, women were not deemed to be primary movers; they need only be available to do much needed yet still ancillary work in the domestic space.

efforts, she published a tract on the Christian heroism of an ordinary soldier in her *Memorials of Captain Hedley Vicars, 97th Regiment* (1855). See Kenneth E. Hall, *Stonewall Jackson and Religious Faith in Military Command* (Jefferson, NC: McFarland & Co., 2005), 92.

⁶² Charles Kingsley, “The Science of Health,” in *Sanitary and Social Lecture and Essays* (London: Macmillan and Co, 1880), 18. Hereafter cited in the text as *SOH*.

Kingsley employs the metaphor in a more complex rhetorical capacity when calling on women to save the English race by medicalizing the domestic sphere. The domestic female was often the target audience of Kingsley's lectures and became an agent to propagate his sanitary doctrines. His lectures frequently rely on the martial metaphor's appeal to pathos. In a speech given to the Ladies' Sanitary Association in 1859, "The Massacre of the Innocents," Kingsley calls on women to act in place of and against a stagnant government to protect the English race—beginning with the children—against disease. He hyperbolizes the effects and difficulties of fighting disease in contrast to fighting a military force; disease, represented as "Nature," "has no protocols, nor any diplomatic advances, whereby she warns her enemy that war is coming . . . she kills, and kills, and kills, and is never tired of killing."⁶³ He continues: "We talk of the loss of human life in war. We are fools of smoke and noise; because there are cannon-balls forsooth, and swords, and red coats, and because it costs a great deal of money. . . . What [is] so terrible as war? I will tell you what is ten times, and ten thousand times, more terrible than war, and that is outraged Nature" (*MOI*, 152). Kingsley entreats the women in his audience to understand their work in martial terms like Florence Nightingale did. The seeming contrast between war and medicine re-inscribes the martial metaphor by positioning disease as a much more dangerous threat than any human or a national enemy. Disease was more dangerous than a traditional enemy, Kingsley argued, because

nature, insidious, inexpensive, silent, sends no roar of the cannon, no glitter of arms to do her work; she gives no warning note of preparation, nor any diplomatic advances, whereby she warns her enemy that she is coming . . . but quietly, by the very same mean by which she makes alive she puts to death; and so avenges herself against those who have rebelled against her. (*MOI*, 152)

⁶³ "The Massacre of the Innocents," in *Sanitary and Social Lecture and Essays* (London: Macmillan and Co, 1880), 151–2. Hereafter cited in the text as *MOI*.

This lecture draws on and instills anxieties about military conquest by disease, which has no “rules.” Death by disease thus becomes the mass murder of innocent children, a trope that recurs in Kingsley’s speeches, as does the comparison between nature in the form of disease and war. The steps he takes to construct this figuration are quite complex: Kingsley uses nature as a metonym for disease, which, as I discuss in the concluding section of this chapter, involves its connection to original sin. Next, he structures the conceptual metaphor so that *disease is an enemy* becomes a hypernym of the larger metaphoric system of *medicine is war*. Finally, having equated medicine to war, Kingsley seemingly discounts his original construction by suggesting that a war against disease is more dangerous than a war against humans. The rhetorical effect of this process is to further naturalize the martial metaphor by obscuring the fact that the original equation of medicine and war was, in fact, a metaphor. In the context of a lecture, this appeals to emotion by heightening the threat of disease. Kingsley plays on the assumed maternal instincts of the audience by saying that they are either a part of or the solution to “the massacre of the innocents” (read: “the massacre of the innocent children”) or a part of the problem.

The way Kingsley describes Nature’s ferocity and murderousness with respect to gender is not unlike Florence Nightingale’s rhetorical construction of poor ventilation as a crime akin to murder:

A short time ago a man walked into a back-kitchen in Queen square, and cut the throat of a poor consumptive creature, sitting by the fire. The murderer did not deny the act, but simply said, ‘It’s all right.’ Of course he was mad. But in our case, the extraordinary thing is that the victim says, ‘It’s all right,’ and that we are not mad. Yet, although we ‘nose’ the murderers, in the musty unaired unsunned room, the scarlet fever which is behind the door, or the fever and hospital gangrene which are stalking among the crowded beds of a hospital ward, we say, “It’s all right.”⁶⁴

⁶⁴ *Notes of Nursing: What It Is, and What It Is Not* (New York: D. Appleton and Company, 1860), 13–14.

By this logic, women are empowered to adopt heroic subjectivities like “soldier” and “doctor” by protecting the innocent against disease. Also drawing on the rhetoric of murder with respect to infectious disease, Kingsley’s Tom Thurnall indignantly contends that cholera is “always someone’s fault: and if death occurs, someone ought to be tried for manslaughter—I had almost said for murder” (*TY*, 281). Thus, despite empowering women, the analogies made by Kingsley and Nightingale also implicate them as accomplices to murder when they do not practice sanitary principles. This disciplinary function made females responsible agents who could save lives but also facilitate death by making mistakes or not following assigned protocols.

If, as Foucault writes in *The Birth of the Clinic*, “the struggle against disease begins with a war against bad government,”⁶⁵ then, for Kingsley, this war began at home with the deployment of Nightingalian principles. Women must arrange, inculcate, and police proper sanitary conditions, whether in a battlefield hospital, in a civilian hospital, or at home; as such, they support patriarchal medicine’s interventions for fighting disease. The relationship between females and medicine, however, was more complicated than straightforward support. Kingsley suggests that “the private correspondence, private conversation, private example, above all, of married woman, of mothers of families, may do what no legislation can do” (*MOI*, 148). In this paradigm, women must use their influence in the domestic sphere to actualize their “natural share in the sacred office of healer” (*SOH*, 22), and it is through their distributed microcenters of power that they can set sanitary reforms in motion from the ground up.

In *Two Years Ago*, Grace wholeheartedly accepts this selfless vocation, readying herself to take orders from her superior: “Tell me what to do in this cholera, and I will do it, if I kill myself with work of infection!” (*TY*, 284). This conflates the martial ethos of dying for one’s

⁶⁵ *Birth*, 33.

country with that of a natural feminine healer. Kingsley's interpellation of women in a naturalized role as healers, furthermore, follows the mythic narrative of Secretary of War Sidney Herbert's request for Florence Nightingale to go to Crimea to help the sick soldiers being treated in unsanitary conditions.⁶⁶ Using the influence that she gained from her work in Crimea, Nightingale finally convinced the government to send a commission to find the nidus of disease. This commission addressed the cesspools in Sebastopol and Scutari in addition to other hygienic concerns. Not all women would have produced Nightingale's effect, and this is not to say that Kingsley's ideals relied solely upon women for their enactment. What I mean to clarify is the way Kingsley empowered women to use their naturalized maternal healing role to become self-driven cogs powering his medico-military machine. In the military, male physicians needed nurses to do much of the manual patient labor and almost all the sanitary work while they focused on surgery and physic. This practice carried over into the nursing and sanitary reforms that contributed to the creation of civilian hospitals where the martial residue of the female role became more metaphorical and less literal. The military and civilian nurse, in the Nightingale image, performs sanitary work and fulfills a supportive role in the home, fighting disease preemptively. Furthermore, by positioning nurses as domestic superintendents, the nursing model empowers women to surveil not only biological but moral hygiene. This aspect of the militancy created from a composite of the nurse and the domestic woman was central to the medicalization of the household and its simultaneous extension to the social body.

Nightingale's well-known disciplinary and military surveillance practices and attitudes regarding medical care were central to this composition, which is why she was such an apt figure for Kingsley to draw upon. Her pedagogy was based on a kind of military fitness: "We shall be

⁶⁶ Nightingale's privileged position facilitated this appointment. Poovey, *Uneven Developments*, 173.

poor soldiers indeed, if we don't train ourselves for battle," she instructed.⁶⁷ Moreover, Nightingale explicitly linked medicine and disease with national interests through the martial metaphor: "And shall we not fight to save? [sic] to save our homes our country, from disease, from cholera? Let us all fight: every man and woman of us—shoulder to shoulder, every citizen and every countryman and every woman, to our duty and our flag!"⁶⁸ By calling on everyone to fight, she stressed the idea that women were also subject to this national duty. Nightingale's domestic ideal fostered the reproduction of this ideology in future generations by modeling and inculcating proper femininity for daughters to emulate and sons to seek out. Kingsley adopted Nightingale's paradigm in order to expound the kind of femininity that could mend a troubled nation fighting endemic epidemics.

In *Two Years Ago*, Grace Harvey embodies multiple dimensions of proper femininity while emblemizing the martial metaphor in the Nightingalian capacity of being a surveilling and supportive military agent, teacher, and muse. She works as a nurse both in the climatic cholera epidemic in Aberalva and afterward, when she leaves for the war in order to use her nursing skills to help the British. In Aberalva, Grace acts as a supportive agent for Tom, seeking out cases of cholera and being the only explicitly named female in the medico-military unit visiting each house: "Headley and Campbell, Grace and old Willis, and last, but not least, Tom Thurnall,—these and three or four brave women, organised themselves into a right-gallant and well-disciplined band" (*TY*, 362). Grace is also identified as the presumed leader of the unnamed "brave" women following the Nightingalian paradigm. In her position as a schoolteacher, furthermore, she fulfils Kingsley's educational role for women. He argues that health classes

⁶⁷ "Florence Nightingale to Her Nurses," (London: Macmillan, 1914), 113–14.

⁶⁸ *Postscript to George H. De'ath's Cholera: What Can We Do About It?* (Buckingham: Walford, 1892), 18–9.

should be taught by women to educate young men and women “not only to take care of themselves, and their families, but to exercise moral influence over their fellow-citizens, as champions in the battle against dirt, drunkenness, disease, and death” (*SOH*, 22).

Grace functions as an intersection between the single household and the nation; she helps alleviate disease in the military, and when she finds Tom, she rehabilitates him, serving as a kind of muse.⁶⁹ Her role in aiding Tom in his personal evolution fits with her being likened to Nausicaa (*TY*, 80), just as Kingsley compares Tom to Ulysses. Nausicaa is the Phoenician princess who spots and cleans up the savage-looking, shipwrecked Ulysses to make him presentable.⁷⁰ Like Nausicaa with Ulysses, Grace “domesticates” Tom, making him acceptable to middle-class propriety and “clothing” some of the more untamed facets of his masculinity. She reins in the unwieldy aspects of Tom’s liberal subjectivity, including his uninhibited masculine self-assertiveness, which, up until the moment he declares his love for Grace, operates without concern for a higher power, namely a Christian God.

Tom’s activities as a spy and his self-assertiveness land him in a Turkish prison before he reaches Crimea. There he is broken, like the British Army, at the hands of the Russians and cholera. But the defeat of his excessive entrepreneurial individualism allows him to find a new sense of purpose through his wife-to-be’s guidance.⁷¹ With respect to actual public health, this literary model reveals how Kingsley’s fiction worked in conjunction with his lectures to mobilize the nation after Crimea by relying on roles of the middle-class male professional hero and the domestic wife and nurse. Beyond constructions of gender, Kingsley relied on another discourse to

⁶⁹ Gilbert, *Cholera and Nation*, 157.

⁷⁰ See Book Six of *The Odyssey*.

⁷¹ Gilbert, *Cholera and Nation*, 176.

make the medico-military war palatable for the nation, needing to make the war against disease coterminous with the struggle for the Christian soul.

God's Breath: Original Sin, Inimical Nature, and Biopolitics

Kingsley's reconciliation between the purely material causes of disease and divine intervention in the form of pestilence was a structuring tenet for the martial metaphor. By registering with both religious and naturalist worldviews, it allowed subjects to gain material agency without letting go of long-held religious beliefs, and allowed regulatory apparatuses to draw on religious rhetoric to produce subjects. Kingsley's ability to operate in both religious and biological discourses gave his use of the martial metaphor extraordinary appeal for a broad audience. The various genres and modes Kingsley utilized magnified this effect. Through pamphlets and sermons, he reached soldiers, wives, mothers, doctors, and reformers. One reviewer of *Two Years Ago* notes that through the novel, Kingsley "obtained a wider audience . . . [M]ultitudes, who would never open an essay of the present state on the world, or the incumbent duties of their generation."⁷² For Kingsley, though, the medico-military war had two fronts in the context of Christianity. The first was an affirmative theology and biopolitics that produced health by fighting original sin, the inimical potentiality for disease and the spiritual analog of the biological seeds of death by infectious disease, namely miasma and filth. The second was the battle to undermine the conservative, extremist religious viewpoints that failed to adopt sanitary science and its accompanying agency to producing health.

In the context of his 1849 sermon on cholera, Kingsley's novel sutures cholera and war through the intersections of religion and the state. Both the cholera epidemics and the Crimean

⁷² "Two Years Ago by Charles Kingsley," 140.

War proved so socially and politically destabilizing that they prompted national “days of humiliation”: days of prayer, thanksgiving, and fasting. National fasts and prayers were ordered during the first and second cholera epidemics and during the Crimean War.⁷³ In a sermon for the national day of humiliation held at the end of the second cholera epidemic, and drafted as part of his pamphlets for Crimean soldiers, Kingsley preached the following:

The Cholera is sent on all those judgments of God [which] are sent, to this life and search men’s hearts and set their sins before their face, so they cannot mistake them . . . It will be much better for us then if the Cholera, or Famine, or War, or anything on the face of Earth, however dreadful should come upon us if it did but reach us [to] see what we had done.⁷⁴

Kingsley suggests that cholera and war are both entities that show men their sins, allowing men to redeem themselves and, as Gilbert suggests, evolve for the better.⁷⁵ This follows Kingsley’s purpose in *Two Years Ago*, as noted by another reviewer: to “make known, to all men, his conviction that out of this fiery purgation this noble land has come ennobled, purified, and made stronger, and braver and better.”⁷⁶ Here, the link between war and medicine speaks to the kind of “original sin” that leaves an individual prey to disease, the sin of failing to understand that life is war and subsequently taking the appropriate measures to be “purged” spiritually and physically. To this effect, the evolution of the self and the nation emerge from the framework of the martial metaphor.

⁷³ Philip Williamson, “State Prayers, Fasts and Thanksgivings: Public Worship in Britain 1830–1897,” *Past & Present* 200, no. 1 (2008): 127.

⁷⁴ Morning sermon on the Day of Humiliation for Cholera [delivered at] Eversley Church. Extracts for ‘Soldiers Book,’ 5 October 1849, Kingsley, Charles (1819–1875), MS.3108, Wellcome Trust Library, 11–12.

⁷⁵ *Cholera and Nation*, 183.

⁷⁶ “Two Years Ago,” *Putnam’s Monthly Magazine of American Literature, Science, and Art* 9, no. 53 (1857): 506.

Kingsley's war against disease is in effect a war against biological forces. He takes this struggle between life and death beyond Bichat's "resistance." Utilizing the figuration of war, Kingsley makes it an active fight by envisioning death, a function of nature, as an enemy that conducts a perpetual siege on life. He constructs the rhetoric of war around a synecdochal relationship between disease and nature, whereby nature is a metonym for disease that acts in martial capacities: "Nature . . . gives no warning note of preparation . . . but quietly, by the very same mean by which she makes alive she puts to death" (*MOI*, 152). Kingsley draws attention, as he did in his lecture to the Ladies' Sanitary Association, to how disease attacks without warning. Nature is contrasted with an implied proper enemy who would signal an impending attack by making a declaration of war. Kingsley unpacks the logic of the materialism inherent in man's medical war against nature and provides a solution: "Nature is only conquered by obeying her" (*MOI*, 152). He uses a similar phrasing in one of his pamphlets for the soldiers in Crimea, aptly titled "Earthy and Heavenly Wisdom, Or Stoop to Conquer."⁷⁷ His writing empowers soldiers and female sanitarians to be on the front lines of the war against disease and to understand their enemy in a material capacity.

Kingsley goes on to define the particular kind of war that nature wages, ultimately forging a contradictory image: "Man has his courtesies of war because he spares the unarmed man; he spares the woman and child"; Nature, by contrast, is red in tooth and claw, "as fierce when she is offended, as boisterous and kind when she is obeyed. Silently she strikes the sleeping babe, with as little remorse as she would strike the strong man, with the spade or musket in his hand" (*MOI*, 152). This in line with Robert Spencer Dyer-Lyons's contention in *Treatise on Fever*, cited previously, that deaths in battle "reap but a small harvest of death when compared

⁷⁷ Kingsley, *True Words*, 138.

with the long black list of mortality which the rolls of disease furnish in such fatal abundance.” For Kingsley, the war against nature is *worse* than actual warfare because nature uses guerrilla tactics, killing the sleeping child, worker, farmer, and soldier alike rather than following the traditional military protocol between enemies.

One logical implication of medicine being a more terrible military endeavor than traditional war is that citizens should not use conventional weapons and tactics, and should instead advocate for the new medical model put forth by the sanitarians involving hygiene, infrastructure, statistics, surveillance, and other biopolitical technologies; these methods attempt to halt disease at its source rather than relying on brute, overt military tactics like cordoning once a disease had already spread. Kingsley’s characterization of nature as an inimical force follows Bichatian logic but specifies that people must have warlike mindsets to resist death and disease. Nature is Janus-faced in this characterization, both giving and taking life.

Kingsley’s feminization of Nature is further indicative of the uneven relationship between male liberal subjects and female sanitary agents. His contentions that Nature gives life only insofar as she is obeyed, and that when obeyed she is conquered, suggest that the male subject’s health, and by extension the nation’s, very much depends on his ability to understand the laws of femininity. This is because females both give birth and conduct the domestic labor and sanitary efforts that allow the male subject to be healthy and productive in the public sphere. Women, in Kingsley’s logic, must themselves be conquered medically and religiously, taking their proper places within the social order and the medico-martial infrastructure lest they become enemies of state health in the form of prostitutes or “redundant women,” as liberal manufacturer W. R. Greg would say.⁷⁸ This is a problem Bram Stoker encounters toward the end of the century

⁷⁸ See Poovey, *Uneven Developments*, 127.

in his writing of the martial metaphor, drawing from the consequences of the military medical concerns of Kingsley's epoch.

For Kingsley, the life of the pious individual follows a biopolitical paradigm. Subjects must "make live," an imperative fostered by regulatory apparatuses such as public health that rely on the military rhetoric of the martial metaphor. Individuals must learn the material ways of God's natural laws. In relation to this, Kingsley's conceptualization of how life is a war on nature operates within the framework of an Edenic narrative. He contends that

your bodies are dead by reason of sin, and in the midst of life we are in death. There is a seed of death in you and me and every little child. While we are eating and drinking and going about our business, fancying that we cannot help living, we carry the seeds of disease in our own bodies, which will surely kill us some day, even if we are not cut off before by some sudden accident. That is true, physicians know that it is true. Our bodies carry in them from the very cradle the seeds of death; and therefore it is not because God leaves us alone that we live. We live because God, our merciful heavenly Father, does not leave us alone, but keeps down those seeds of disease and death by His Spirit, who is the Lord and Giver of Life. (*MOI*, 131)

The figuration of the seed of death corresponds to the Fall, which, stemming from the Tree of the Knowledge of Good and Evil, made man and woman mortal and thus susceptible to disease. This is a connection Kingsley expands upon at length in his sermon "The Fall."⁷⁹ He equates the failure to fight death and disease with resignation to man's concupiscent condition, the diseased state of the soul tainted by original sin.⁸⁰ Kingsley's deployment of the martial metaphor reveals how "making live" entails taking defensive and offensive actions against pathogenic agents rather than simply trying to pray the disease away. Yet to make the most people live, the same apparatuses must "let die." As Gilbert suggests in her reading of *Two Years Ago*, through the

⁷⁹ See Charles Kingsley, "The Fall," in *Sermons on National Subjects* (London: Macmillan, 1890), 412.

⁸⁰ Hamlin has also identified the relationship between disease, nature, and sin in Kingsley's writings. *Cholera*, 87–89, 94.

survival of nations and the human species, “maladaptive ‘scar tissue’ die[s] and must be sloughed.”⁸¹ The narrative closure of *Two Years Ago* reflects this: the characters who do not conform to Kingsley’s sanitary laws or gender norms, such as the effeminate, opium-addicted Eley Vavasour, do not survive the cholera epidemic, while the strong characters—like Tom and Grace—marry and reproduce. The seeds of death and disease, as described in Kingsley’s lectures, inflect the concept of Bichat’s resistance into a war for the production of life. As we will see in Stoker and Conrad, the image of seed, soil, and vitalism take an pathogenic valence in the era of microbiology.

This model reconciles theology with pathology: God keeps men alive for the purpose of saving them in the same way that a father protects his children from “danger they cannot see” (*TW*, 132). The allusion to God as a father connects to Kingsley himself and his position as an Anglican clergyman. This office, an analog of God’s relationship to all Christians, served the specific biopolitical purpose of creating conductible, self-driven populations. But the reference to a father keeping his children safe, and the very mode of Kingsley’s address, also speaks to the Christian pastoral and its function in biopolitics. The significance of this connection lies in the Christian pastorate’s role as a precursor to governmentality.⁸² The logic of divine support conjoined with taking personal responsibility for health was a way for Kingsley to resist the punitive and unproductive implications of forestalling human agency. The purely punitive model, on which disease was the result of divine agency, operates analogously to Foucault’s juridical

⁸¹ *Cholera and Nation*, 159, 5.

⁸² As Foucault suggests in his lecture series *Security, Territory, Population*, when we talk about the pastoral, we are talking about the history of the subject (184, 200, 234). On the Victorian iterations of subjectivity and the pastoral in the formation of governance, see Lauren M. E. Goodlad, *Victorian Literature and the Victorian State: Character and Governance in a Liberal Society* (Baltimore: Johns Hopkins University Press, 2003).

apparatus: an unproductive exercise of power through which life is not “made” but simply taken when it is deployed on its own. As we will see in *Dracula*, however, the juridical doesn’t go away in the system of the martial metaphor.

In contrast to the punitive model of divine taking of life, Kingsley suggests that God forestalls disease through his “spirit.” God’s spirit or “breath,” which exists in a directly antagonist relationship to miasmatic pestilence, “inspires” and inculcates a discipline that can produce a subject who fulfills God’s desire for humans: that they *make themselves* to “make [themselves] live.”⁸³ Although the metaphysical dimensions of this argument involve an abstract-seeming notion of causality, the disciplinary model of fighting the seeds of mortality encouraged Christians to actualize hygienically productive subjectivities by grounding this model in the material world.

In this capacity, Kingsley formulated God’s breath as an anti-miasmatic agent in the religious allegory of good versus evil, within which the human body and the community form a battleground. For this paradigm to operate, however, “evil” must be represented by an embodied entity like miasma rather than an abstract concept like original sin. Here, miasma is “evil,” but it is still a part of nature, a nature of man’s own making. Following Nightingale and other sanitarians’ focus on air quality, Kingsley uses the idea of “breath” as a way to work through the discursive amalgam of disease, miasma, sin, life, and death.

In Kingsley’s lecture “The Two Breaths,” he set ups a dialectic of exhalation and inhalation that he connects to disease and death being already imbricated within life.⁸⁴ He writes,

⁸³ Cf. *Alton Locke*: “The only way to write songs—to let some air get possession of one’s whole soul, and gradually inspire the words for itself; as the old Hebrew prophets had music played before them, to wake up the prophetic spirit within them.” Charles Kingsley, *Alton Locke* (London: Macmillan, 1862), 189.

⁸⁴ “The Two Breaths,” in *Health and Education* (London: W. Ibster and Co., 1874). He utilizes one anecdote to connect this process to infectious disease: “Sir James Simpson tells in his

“The breath which you give out is an impure air, to which has been added, among other matters which will not support life, an excess of carbonic acid. . . . I beseech you to remember at least these two—oxygen gas and carbonic acid gas; and to remember that, as surely as oxygen feeds the fire of life, so surely does carbonic acid put it out.”⁸⁵ Basic chemistry and physiology explain the double bind in the life-and-death binary here: exhalation, while a natural process, is essentially a gaseous excrement. This exchange is similar to the dialectic of life and death in which life eventually leads to and produces death. Kingsley understood the exchange between life and death via the concept of fire, a symbol of the Holy Spirit and the physical touchstone of God’s breath: oxygen. His fixation on fire is one of the clearest examples of his ideological reconciliation of the spiritual and the material in terms of miasmatic disease: in his paradigm, the fire represents God’s spirit but is also a material reality that is emblematic of the life given by God’s breath. This is because it both resists death by bringing in oxygen and produces death by exhaling carbon dioxide. With respect to the latter, Kingsley gives an example of a biological experiment in which a mouse placed in a box ultimately die by its own breath.

The practical advice Kingsley gives to women in “The Two Breaths” is essentially the material side of his spiritual focus in his village sermon “Life and Death,” where he preached that

the [Bible] tells us, God takes away breath, and turns His face from him. In His presence, it is written, is life. The moment He withdraws his Spirit, the Spirit of life, from any thing [sic], body or soul, then it dies. It was by sin came death—by man's becoming unfit for the Spirit of God. Therefore the body is dead because of sin, says St. Paul, doomed to die, carrying about in it the seeds of death.⁸⁶

lectures to the working-classes of Edinburgh, when at a Christmas meeting thirty-six persons danced all night in a small room with a low ceiling, keeping the doors and windows shut. The atmosphere of the room was noxious beyond description; and the effect was, that seven of the party were soon after seized with typhus fever, of which two died” (28).

⁸⁵ Ibid., 30. *Carbonic acid* was the nineteenth-century term for carbon dioxide.

⁸⁶ “Life and Death,” in *Twenty-Five Village Sermons* (London: John Parker, 1849), 32. In “The Resurrection,” Kingsley contends that it is God’s spirit that keeps decay away from Christ’s

In this way, death and disease are not the natural state as such, a contention that Kingsley makes in numerous other sermons and a tenet of his battle against disease. Accepting God's natural laws is part of a general Christian framework for the production of a viable subjectivity in which the individual is inspired by anti-miasmatic agency—that is, by God's material breath of life, oxygen, and a body to metabolize it; and by his "inspiration" to live according to natural and hygienic laws. In this capacity, inspiration is Kingsley's theological underpinning of the martial metaphor.

Ultimately, Kingsley's conceptualization of how individuals should and should not understand their relationship with God is analogous to the biopolitical and juridical paradigm of state power. In other words, Kingsley insists that humans should not conceptualize God in a purely juridical capacity. God does not only punish and take away life; rather, God's primary aim, and the imperative that individuals should adopt, is viability:

When we talk of being 'ushered into the presence of God,' we mean dying; as if we were not all in the presence of God at this moment, and all day long. When we say, 'Prepare to meet thy God,' we mean 'Prepare to die;' . . . our notion is this—that this world is a machine, which would go on very well by itself, if God would but leave it alone. . . . Ah! blind that we are; blind to the power and glory of God which is around us, giving life and breath to all things. . . . Because we will not believe in a God of love and order, we grow to believe in a God of anger and disorder. Because we will not fear a God who sends fruitful seasons, we are grown to dread a God who sends famine and pestilence. . . . [W]e believe in Him only as the destroyer. We have forgotten that He is the Giver, the Creator, the Redeemer.⁸⁷

By arguing that people should focus on a god of "love and order" rather than a god of "anger and disorder," and pointing out that the thought of God was tied to the thought of "prepar[ing] to die" rather than continuing to live, Kingsley suggests that Christianity must be productive, must produce life in the face of death. This is precisely the same kind of paradigm shift that led to the

body; that is why his body remains alive and does not submit to physical corruption. Charles Kingsley, "The Resurrection," in *Twenty-Five Village Sermons* (London: John Parker, 1849), 182.

⁸⁷ Kingsley, "Cholera, 1866," 198.

emergence of biogovernance and the change from “epidemic” to “endemic” thinking at the end of the eighteenth century. After this shift, “Death was no longer something that swooped down on life—an epidemic. Death was now something permanent, something that slips into life, perpetually gnaws at it, diminishes it and weakens it.”⁸⁸ The institution of hygienic subjectivities and the implementation of sanitary reform were ways to mitigate the permanence of death. The threat of disease became perpetual but much less spectacular when it was conceptualized as a state of siege rather than a singular event.

Two Years Ago links this reconciliation of material biology with Christian doctrine in Kingsley’s lectures and sermons. For example, in the chapter “Baalzabub’s Banquet,” there is a perceptible shift in the narrator’s tone while describing the cholera epidemic. After opening with medical facts that portray the exponential growth of the disease, the chapter shifts rapidly to biblical figurations reminiscent of Revelation: “The next day there were three cholera cases: the day after there were thirteen. He had come at last, Baalzabub, God of flies, and of what flies are bred from; to visit his self-blinded worshippers, and bestow on them his own Cross of the Legion of Dishonour” (*TY*, 258). This metaphor serves two functions: first, it constructs a general image of miasma as a figure of evil through an allusion to disease and putrefaction; second, it vilifies the conservative theology that subscribes to a God of punitive rather than productive biopolitics, a deity who punishes and kills rather than creating and inspiring life and health. Baalzabub is a fitting emblem for cholera, insofar as he is the “the lord of flies,” a phrase that connotes both evil and disease. This also fits in with physician William Farr’s model of zymotic disease, in which miasma emanated specifically from putrefying organic material as a kind of fermentation.⁸⁹ In

⁸⁸ Foucault, *Society*, 244.

⁸⁹ For Farr, the infectious quality of miasma was due to a process similar to fermentation, wherein the decay or organic material produced a kind of poison, which then produced disease. This work operated between the disciplines of organic chemistry and statistical calculation. See

this etiology, death is both a cause and an effect of sickness: it produces corruption and decay, leading to corrupt air, which in turn infects the living. Baalzabub, therefore, works in opposition to God's spirit, as the word *spirit* not only evokes breath but carries the meaning of its Latinate root *spirare*: "to breathe." Beyond his origins as a fallen angel, Baalzabub is figured martially: he bestows military honors on his followers, "the Cross of the Legion of Dishonour." Moreover, to personify disease as the Devil is to position it in diametric opposition to God. The idea of God's work as an anti-miasmatic, inspirational agent directly contrasts Kingsley's theory of disease with theologies that saw it as an unchallengeable judgment from God, something that could only be accepted in a kind of Jobian capacity.

For Kingsley, then, part of the medico-military war was to be waged against Christian theology. Baalzabub's "self-blinded worshipers" were those who wrongfully interpreted disease as a divine punishment that could be alleviated only by prayer. In the novel, these people appear as a collection of devout and dissident Methodists who become worshipers of Baalzabub insofar as they refuse to help the sick, assuming that sick people deserve the punishment they receive from God.⁹⁰ The most explicit example of this is a Methodist preacher for whom cholera is "God's wrath," and who claims that it is "impious to interfere" (*TY*, 365). In other words, he holds, pious Christians can pray to God to end the epidemic, but fighting it more directly would be resisting God's will. This theological position directly opposes the logic of the martial metaphor. In the novel, Major Campbell breaks up the preacher's sermon just as Tom notices the

Margaret Pelling, "The Meaning of Contagion." Farr observed that earlier medical researchers identified zymotic process with combustion among other similar processes. William Farr, *Vital Statistics: A Memorable Volume of Selections from the Writings and Report of William Farr* (London: Office of the Sanitary Institute, 1885), 249. Also notable with respect to Farr is the fact that he is considered one of the founders of medical statistics, a critical technology in biopolitical governance.

⁹⁰ Carpenter, *Health, Medicine, and Society*, 34.

symptoms of cholera rapidly taking hold of him, and the preacher dies two hours later, becoming a not-so-innocent casualty—the “tissue that must be sloughed,” to use Gilbert’s phrase. Whether the “self-blinded” do nothing out of a sense of divine justice or out of blind faith that God will protect them, they neglect the material conditions of existence and allow filth to compound. In an earlier scene, Tom and Major Campbell help the local Anglican curate, Frank, in his “crusade against the Dissenters.” He has so far failed in his crusade because he is “not overtly manly” and is insufficiently assertive in leading his flock and fighting blasphemy (*TY*, 254). In the Baalzabub passage, the war against disease is cast in a similar a crusading rhetoric when the enemy is identified as not just filth, but also heathens.

It is important to note that the word *heathen* refers less to divergent sects than to the conservative and extremist Christian clergy who would not take account of modern sanitation science in their theology. Tom confronts these non-believers because they are not just harming themselves but spreading their ideas among the townsfolk. Tom’s actions link the work of the clergyman with that of the doctor, a position that Kingsley also endorsed in “The Physician’s Calling” where he argued that “the clergy should as much as possible be physicians; the physician, as much as possible, a clergyman” (*PC*, 22). According to Kingsley, physicians and clergymen must work together to produce health and virtue in the general population’s bodies and souls. This is precisely why Kingsley used *Two Years Ago*, with its medical protagonist, alongside lectures and sermons to affirm a productive biopolitics and promote the idea that individuals should actively fight death rather than resign themselves to it. This is also the contradiction between Christianity’s acceptance of death and the reality of infectious disease that Kingsley resolves. His theology was based on humans sharing a biopolitical relationship with God, a relationship that functioned both as humanity’s primary weapon in the war against disease and as a productive form of the power to live hygienically. The martial metaphor became,

therefore, a way for Kingsley to constitute simultaneously a Christian, a national, and a biological social body.

Of course, God's breath cannot forestall death permanently. Kingsley believed in the noble efforts of physicians holding the line as long as they could for their dying patients. Of these labors, he writes that

in all those little efforts [the physician], so wise, so anxious, so tender, so truly chivalrous, to keep the failing breath for a few moments more in the body of one who had no earthly claim upon his care, that doctor was bearing a testimony, unconscious yet most weighty, to that human instinct of which the Bible approves throughout, that death in a human being is an evil, an anomaly, a curse; against which, though he could not rescue the man from the clutch of his foe, he was bound, in duty and honour, to fight until the last, simply because it was death, and death was the enemy of man. (*PC*, 25)

Nevertheless, biological human frailty would ultimately overcome Kingsley's own good health, and his long battle to produce life would end in defeat. On his deathbed, Kingsley invoked the martial metaphor again. In *Letters and Memories of his Life*, edited by Kingsley's wife Fanny, Kingsley's biographer Fredrick Maurice writes, "He promised his wife to 'fight for his life' for his children's sake, and he did so for some time; but the enemy or as he would have said to himself 'kindly Death' was too strong for him, and the battle was over."⁹¹ Though this final resignation was an inevitability that Kingsley had clearly reconciled with his belief system, as evident in his qualification of death as "kindly," he was ultimately memorialized by this codification of the martial metaphor. The metaphor was indeed contagious, infecting not only the way his wife Fanny and his close friend Maurice viewed health and sickness, but also, through his textual corpus, the ideas of the entire British public. While knowing that defeat was inevitable—and that eternal life waited for true believers—Kingsley used the martial metaphor to create productive social subjects in one life while keeping an eye on the next.

⁹¹ Charles Kingsley and Fredrick Maurice, *The Works of Charles Kingsley: Life and Memories*, 2 vols., vol. 1 (Philadelphia: John D. Morris & Co., 1899), 385.

* * *

In Kingsley's iteration, the martial metaphor proved able to draw from and be included in religious discourse while remaining grounded in the materiality of pathology. It could also create a productive form of empowerment, as it gives its subjects not only agency but a duty to the natural and social worlds. Making disease an enemy imposes a kind of order on the logic, popular in previous centuries, by which fluctuations in human health were explained as divine punishment. Moreover, the martial metaphor imposed an order on disease itself, metaphorizing it as an entity before germ theory could explain and visually present disease through microscopy. This figurative embodiment provided a target for material practices. It gave subjects an object to fight against by adopting disciplinary techniques in the form of middle-class sanitary practices, which were conceptualized by physicians, politicized by prominent social figures, and deployed in the household by women. This fight against death involved not only the empowering right to govern one's own health and life, but also a duty to the social body. In these ways, the martial metaphor also appropriated the logic of original sin for the purpose of governmentality.

Contextualizing Kingsley within the codification of the martial metaphor changes the stakes of reading *Two Years Ago*. The novel performs a tremendous amount of cultural work, organizing Kingsley's participation in the growth of the martial metaphor as the central conceptual paradigm for medical discourse. Kingsley was thus a prominent actor in the emergence of the metaphor. His investment in military and sanitary reform found a mechanism for thriving on gender scripts like those of the domestic ideal and the military hero, all the while reconciling the contradictions between material disease etiology and the notion of divine intervention. By offering subjects a form of empowerment, the martial metaphor fueled an increasingly industrialized nation and expanding empire. Therefore, Kingsley's medico-military war was waged not only on the body, but also on domestic, theological, and political fronts. His

vision for the unification of the two “brothers of the nation” relied on the ruling classes making investments in the laboring population, investments involving infrastructure, public works, regulatory apparatuses for epidemiology such as statistical methods of tracking disease, and political interventions such as the Public Health Acts and the Sanitary Act.⁹² The martial underpinnings of this form of self-governance made resignation to death in the everyday material practices of life—the care of the self, the hygiene of the family, and the subjectification of the self under the medical gaze—into a moral and political failure. In this sense, the martial metaphor was simultaneously a mechanism of empowerment and of control.

Kingsley’s use of the martial metaphor also helped construct a regulatory apparatus with seemingly contradictory politics. On one hand, it promoted the middle class’s investment in the working class, which entailed seeking political reform, volunteering and laboring to promote the health of the working class, and serving as models for working-class individuals to emulate. On the other hand, it empowered the working class to rely on themselves for their health: according to Kingsley, they should not “comfort [them]selves in [their] carelessness with the thought, ‘if [sic] am sick, Parish must doctor me, if I starved Parish must feed me’ . . . [for] so long as [they] do so [they] will be miserable.”⁹³ By having it both ways, the system is reinforced from both above and below. The subsequent production of working-class health was necessary to the middle class in terms of labor power for economic concerns. Who else would sail Jacob’s ships and dig his mines?

⁹² The Public Health Act of 1848 gave local health boards the power to regulate environmental health risks such as public works. These were “productive” rather than punitive, as the public had the power to enact local boards if 10% of the population petitioned for it. The Sanitary Act of 1866 compelled these local boards to act, and if they failed to do so, it gave towns the power to appoint sanitary inspectors to force the home secretary (the local police authority) to remove “nuisance.”

⁹³ Morning sermon on the Day of Humiliation for Cholera, 11–12.

Beyond financial concerns, however, the health economies of the middle class were also at stake. The ethereal nature of miasma let it penetrate the boundaries of literal cordons and the urban development of class separation,⁹⁴ which all of London would experience during the Great Stink of 1858.⁹⁵ This was an event that did not actually foster disease but certainly fostered anxiety. In another capacity, the health of the working class served the control and disposal of everyone's waste, which was performed by nightmen and, later, sewer-builders. As such, disease, whether associated directly with the poor and working class or indirectly with middle-class bodies, became "a problem of all." Thus, while still privileging and relying on middle-class male subjects, Kingsley's deployment of the martial military metaphor cut across class and gender lines to unify the nation in the perpetual medico-military battle against death and disease.

As I show in part II which follows, however, the martial metaphor became a way to link and separate the homeland not just with a single foreign war, but, as in Shelley, with the empire at large. In the age of the germ, thinking of medicine as war became a way to respond to the ever-more-interconnected world and its effects not just on England as a nation, but on the English as a race.

⁹⁴ Kingsley would write about this phenomenon in particular in *Cheap Clothes and Nasty*, indicating that upper class consumers were still prey to disease because of the conditions out of which goods were produced.

⁹⁵ The Great Stink of 1858 was characterized by an unusually hot August whose temperatures made the human waste in the Thames to significantly more odorous than normal. This was believed to produce miasma and was thought by many, despite Snow's work, to cause disease. Ultimately, it was a significant factor in the development of a new sewer system. See Stephen Halliday, *The Great Filth: The War against Disease in Victorian England* (Stroud, Gloucestershire: Sutton, 2007).

Chapter 3: Military Pasts and Medical Futures in Bram Stoker's *Dracula*

The impact of the Crimean War on the medical profession and public health did not end with Kingsley and cholera in the mid-century. The British military's interest in the health of its soldiers developed into one of the most emblematic instances of military medicine entering the civilian sphere: the Contagious Diseases (CD) Acts of 1864, 1866, and 1869. The CD Acts were passed in response to high rates of syphilis among enlisted men and allowed police to inspect and detain sex workers who were thought to be infected with the disease. Emerging from a mid-century war and developed further in two revisions in the 1860s, the acts had an impact on medicine and politics that continued up to the fin de siècle. Through the detention of suspected sex workers, they amounted to a quarantine system both in logic and in material application. The quarantine is the materialization par excellence of the martial metaphor, as it is the militarily enforced containment of population. Yet contextualizing this visible exercise of military force—men guarding a delimited group from another with guns—as a medical means allows us to see its influence on seemingly non-violent yet coercive productions of health in modernity.

Diverging from Kingsley and his interest the Crimean War vis-à-vis cholera, Bram Stoker's *Dracula* (1897), in its reflection on women's sexuality, disease, and vampirism, was in part a response to the military medical politics of the CD Acts. *Dracula* bridges the martial metaphor from Kingsley to the authors who developed it in the age of germ theory, extending the relevance of the Crimean War to civilian medicine. The novel's representation of quarantine, and of its materialization in the CD Acts, highlights its violent, military qualities and signals the punitive and violent material practices that underlie the figuration of the martial metaphor. The CD Acts' disciplining and punishing of women's sexuality draws on the same dialectic as the novel, a feature that structures *Dracula*'s narrative form, genre, and use of medical and military discourse. However, although Stoker draws on the older model of quarantine, he does so while

writing the vampire in the modern frame of the microbe. This inflection of the martial metaphor in the age of germ theory develops away from Kingsley's theological accommodations while retaining the rhetoric of good versus evil for national interests and moves into a new, broader context of race and empire, one that Conan Doyle and Conrad developed into the twentieth century.

Seeing how *Dracula* brings together the old and the new is crucial to understanding the genealogy of the martial metaphor and its cultural work. Count Dracula is at once an archaic creature and a monster of modernity. He is centuries old yet thrives in the modern metropolis and its international circulation of capital. Literary authors responding to the discourse of communicable disease after the 1880s, such as Conan Doyle and Conrad, wrote under the newly developing paradigm of germ theory. The germ, as a living entity, maps on to racial anxieties of purity not just because it is animate—as if germs were a new race—but because of its ability to reproduce. While germ theory understands disease as an inimical, living, and ontologically discrete agent, the way *Dracula* is informed by germ theory—especially parasitology—while still drawing from the older (in 1897) disease models of miasma and contagion, marks how the changing models of disease existed in a co-constitutive relationship with questions of race, nation, and empire: anxieties about the history and future viability of that which is British. Thus, this chapter marks a temporal disjunction in the arrangement of the texts discussed: the next chapter discusses Doyle's texts from before 1890, but I begin part II with *Dracula* to draw attention to the way the novel was influenced both by the military history of the Crimean War and by the differences in theories of disease etiology, across the nineteenth century and among the distinct models of power in the history of governance we saw in part I.

Dracula's dialectic is evident in its narrative and genre, specifically insofar as it is characteristic of the way late Victorian Gothic was at once old and new. Late Victorian Gothic, or

Urban Gothic, refashioned tropes from the late eighteenth-century Gothic and the romance into the anxieties and structures of the fin de siècle, for example in the translation of the decaying medieval castles to the squalor of the modern city, the inflection of the monstrous in the capacity of the degenerate, and the movement toward empiricism as an explanatory model for even the supernatural.¹ One change in the Urban Gothic was the appearance of horror in everyday life, in contrast to the far-and-away of Radcliffe's castle in the Apennines. This follows Henry James's suggestion that "a good ghost-story, to be half as terrible as a good murder-story, must be connected at a hundred points with the common objects of life."² The Gothic brings the horrific home. Stoker's move was to bring the horror of foreign degeneration and infectious disease to London. In the age of germ theory, it wasn't just the East End and its noxious abodes that fostered disease, because microbes didn't make the class distinctions that miasma did.

Developing Kingsley's writing of the martial metaphor, Stoker brings the war against disease home to everyone, especially the middle-class reader. At the same time, however, by drawing on a supernatural figure and spectacle, Stoker provides the reader with a conceptual distance from the war and the military histories he invokes. Thus, he occludes the material history of the martial metaphor by sublimating the fear of the foreign, of the sexually illicit, and of infectious microbial disease and degeneration into a narrative of good versus evil. I suggest that *Dracula* makes the role of the military in civilian medicine into a kind of specter, haunting the

¹ Kathleen L. Spencer, "Purity and Danger: Dracula, the Urban Gothic, and the Late Victorian Degeneracy Crisis," *ELH* 59, no. 1 (1992): 335. See also Anne Stiles, *Popular Fiction and Brain Science in the Late Nineteenth Century* (Cambridge: Cambridge University Press, 2012). Both Spencer and Stiles point to the relations and distinctions between the Romance and the Gothic. Stiles, for instance, suggests that the revived Gothic and the romance developed into the science fiction of Wells and others. Spencer characterizes Dracula as Urban Gothic, while Stiles considers it to be a "Gothic romance."

² Quoted in Spencer, "Purity and Danger," 201.

increased militarization of medicine in the public imaginary. The way the novel operates through the old and the new simultaneously indicates this cultural work with respect to medical discourse, specifically its writing of the martial metaphor. As Fred Botting observes, *Dracula* is highly overdetermined.³ Viewed through the martial metaphor, *Dracula*'s dialectical relationship to time operates on three orders: the military, the medical, and the biopolitical, combining all three in the conflict between the "Crew of Light" and the vampire. To this effect, the novel participated in the circulation of the metaphor in a way that obscured the militaristic history of public health. Its overt use of a fictional creature to conflate military endeavors and medical science facilitated the naturalization of the martial metaphor.

Dracula represents an archaic military and supernatural force, and the Crew of Light must marshal their era's most advanced technologies to track and eliminate his threat: the phonogram, the electric lantern, and even blood transfusion—in the last case a medical technology ahead of its time. That is, they can use the advances of modernity to resist that which they were once the victims of—a supernatural vision of disease that didn't allow for resistance, which as we saw in the first chapter is one way readers could interpret Shelley's pestilential sublime in *The Last Man*.

In terms of medical history and the prominence of different disease theories at different points in the century, *Dracula* works in a modality similar to that of Shelley's plague: conflation of disease theories. Throughout Stoker's novel, the vampire is figured in images and language of contagionism, anticontagionism, and germ theory. This amalgam reiterates Halberstam's contention that *Dracula* is a distilled version of all that is other.⁴ To this effect, *Dracula* is a concentrated yet overdetermined figure of the ontological threat produced by the invasive quality

³ *Gothic*, 2nd ed. (Florence: Taylor and Francis, 1999), 142.

⁴ "Technologies of Monstrosity: Bram Stoker's 'Dracula,'" *Victorian Studies* 36, no. 3 (1993): 334.

of disease in the various guises of agency it took in the nineteenth century: its ability to penetrate the biological boundary that produces the autonomous and self-contained subject.⁵

In addition to conflating the temporality of disease theories, the novel's framing of the vampire's antiquity and modernity signals how the martial metaphor's use as a technology of biopolitics is also old and new. Through the development of modern medicine and statecraft in the nineteenth century, the juridical apparatus of the sovereign remained with the disciplinary apparatus and regulatory biopolitics of modern biopower. Stoker's articulation of this "use of force" in a medical and juridical capacity exposes the sexual politics of the novel. Unlike Kingsley, who promoted the positive, productive exercise of biopower for the formation of disciplined, hygienic subjectivities in the regulated population at large, Stoker brings back the seemingly pre-modern juridical apparatus, both in sovereign punishment and in military-enforced quarantine. This return suggests that it was never really gone but remained an underlying logic and practice of public health, occluded and supported by thinking of medicine as war.

Victorian studies and medical history have yet to draw the connection between *Dracula* and the militarization of medicine, even though this is the metaphor's most widely circulated iteration among novels, especially given its influence and critical response. Yet neither the history of medicine nor that of infectious disease is a particularly foreign topic to scholarly readings of the novel.⁶ Most recently, Jesse Taylor has explored the novel's miasmatic discourse in terms of air

⁵ Otis, *Membranes*, 9.

⁶ Katherine Byrne draws the connection between consumption and vampirism. Katherine Byrne, *Tuberculosis and the Victorian Literary Imagination* (Cambridge: Cambridge University Press, 2011). The novel's relation to history of psychiatry and addiction have been particular areas of interest. Stiles, *Popular Fiction and Brain Science*; Susan Zieger, *Inventing the Addict: Drugs, Race, and Sexuality in Nineteenth-Century British and American Literature* (Amherst: University of Massachusetts Press, 2008); Régis Olry and Duane E. Haines, "Renfield's Syndrome: A Psychiatric Illness Drawn from Bram Stoker's *Dracula*," *Journal of the History of the Neurosciences* 20, no. 4 (2011); Choi, *Anonymous Connections*.

pollution.⁷ Tabitha Sparks has set *Dracula* in conversation with the history of military medicine in her reading of the novel's relation to the CD Acts, alongside Martin Willis⁸ and others who have also read it in terms of infectious disease. This is especially relevant to the vampire's appearance as an embodiment of syphilis and of venereal disease more broadly.⁹ Much of the work in this vein draws on readings of the anxieties of empire and degeneration, a tone most notably set by Stephen Arata's reading of reverse colonization.¹⁰ Jens Lohfert Jørgensen has more specifically identified in *Dracula* an engagement with what he calls "bacillophobia," addressing the way the novel challenged the cohesion of late Victorian society and the boundaries between interiority and exteriority by examining cultural responses to the development of germ theory.¹¹ In a more specific reading of germ theory, Emile Taylor-Brown, and following her Ross Forman, has read the novel in terms of parasitology and tropical medicine.¹² While Brown focuses on the literary parasite's conflation of the biological and social bodies and how the intersection speaks to

⁷ *The Sky of Our Manufacture: The London Fog and British Fiction from Dickens to Woolf* (Charlottesville University of Virginia Press, 2016).

⁸ *The Doctor in the Victorian Novel: Family Practices*. (Farnham: Ashgate, 2010). "'The Invisible Giant,' 'Dracula,' and Disease," *Studies in the Novel* 39, no. 3 (2007).

⁹ Nina Auerbach and David J. Skal, *Dracula: Authoritative Text, Contexts, Reviews and Reactions, Dramatic and Film Variations, Criticism* (New York: W. W. Norton, 1997), 363.

¹⁰ "The Occidental Tourist: 'Dracula' and the Anxiety of Reverse Colonization," *Victorian Studies* 33, no. 4 (1990).

¹¹ "Bacillophobia: Man and Microbes in *Dracula*, the War of the Worlds, and the Nigger of the 'Narcissus,'" *Critical Survey* 27, no. 2 (2015).

¹² Emilie Taylor-Brown, "'She Has a Parasite Soul!' The Pathologization of the Gothic Monster as Parasitic Hybrid in Bram Stoker's *Dracula*, Richard Marsh's *The Beetle*, and Arthur Conan Doyle's 'The Parasite,'" in *Monsters and Monstrosity from the Fin de Siècle to the Millennium: New Essays*, eds. Sharla Hutchison and Rebecca A. Brown (Jefferson: McFarland, 2015); Ross G. Forman, "A Parasite for Sore Eyes: Rereading Infection Metaphors in Bram Stoker's *Dracula*," *Victorian Literature and Culture* 44, no. 4 (2016): 927.

unequal power relations and autonomy, Forman suggests that the host-parasite relationship is reflected in the modernist bricolage in the novel, a relationship that suggests how medical science and literary forms drew from each other to “raise tensions and sustain suspense.”¹³ Building on these identifications of parasitological discourse, I focus on the way the novel mobilizes the military narratives of tropical medicine to justify the military infrastructure of colonial efforts and map their ideas about primitivism onto the undesirable sections of the population in England. The metaphor of war thus becomes a way to produce and ameliorate anxieties of otherness in a biological capacity. I discuss tropical medicine at length in the final chapter on Conrad; here I show how *Dracula*’s dialectical Gothic temporality conflates several distinct disease etiologies, including parasitology. This chapter develops the way the conflation of communicable, environmental, and hereditary disease was channeled into the simplistic terms and easy relatability of the phobia of the foreign, of a war between “us” and “them,” serving the political ends of expanding the jurisdiction to define this antagonism in medical terms.

I follow Tina Young Choi’s contention that the novel is concerned with English narratives that try to impose order and delimit Dracula’s parasitic narrative, which threatens to engulf the other subplots and voices into his own familial history. As she suggests, the germ wields control over an engulfing plot that challenges English narrative sovereignty.¹⁴ This kind of contestation over narrative voices is an inflection of the martial metaphor. While she refers to the bellicose modes and metaphors of battle in *Dracula* and other germ narratives in literature and prose, I suggest that we must look at the language of parasitology, colonization, and penetration of the body specifically in terms of the military discourse in the novel to see how this informs the

¹³ Forman, “A Parasite,” 927.

¹⁴ *Anonymous Connections*, 146-47.

broader narrative order imposed by the martial metaphor, and attempts, in the medical and popular imaginary, to become anthropocentrically sovereign—a reflection of the novel’s “triumphant unity”¹⁵ and its conclusion. To do this, we must consider the role the novel played in responding to military history and solidifying the language through which Victorians and we ourselves understand disease.

Dracula emblemizes the cultural forces that subtend the martial metaphor. The novel doesn’t just represent a specific historical moment; it molds a longer transhistorical understanding of disease into a shaping force in the circulation of the metaphor itself during the rise of eugenic science and tropical medicine and immediately before the advent of antibiotic pharmacology, in turn shaping these informing discourses in modern medicine more broadly. Reading the novel in this military and medical history reveals the symbiotic work of sovereign force and biopower in public health. In theoretical terms, we see the coadjutant operation of the juridical, the disciplinary, and the regulatory biopolitical apparatuses. At the same time, unraveling the novel’s relationship with the martial metaphor shows us how literature functioned as a means to “reenchant” medical science in binary terms—good versus evil—and in a plottable narrative order—the English race’s defeat of disease.

I begin this chapter by showing how Stoker writes the narrative and the conflict of the novel’s protagonists with Dracula as a conflated medical war: because the vampire is at once a monster from the old world and a biological threat of modernity, the Crew of Light uses violent force and medical practices while constructing their identity as heroes from a mythic past. The novel’s use of military language creates the medical war by conflating biological and territorial invasion through the pathologization of race: the other becomes both a national and a biological

¹⁵ Ibid., 147.

risk to security. Taking account of the male protagonists' fight against a pathologized view of women's sexuality, I show how the military and medical history of the CD Acts is sublimated into the metaphorical abstraction. In the third section, I discuss the overdetermined nature of Dracula's ontological status as a disease, showing how old and modern conceptualizations of disease come together to agentify disease. Following a discussion of germ theory, I offer a reading of how the novel invokes the military history and imperatives of tropical medicine through its representations of parasitology, leading into the concluding chapters on how Conan Doyle and Conrad develop the martial metaphor in the age of germ theory, anxieties of race and degeneration, and imperialism.

Brave Men, Blood, and Biopolitics

As an anxiogenic figure, the vampire has a particular affinity with the mobilization of the martial metaphor; Stoker associates antiquity with military invasion and old-world forces with the epidemiological threats to modern Victorian England. Linking the old military anxieties with the new medical biological ones in the form of racial degeneration, *Dracula* translates the sovereign focus on territory into the era of biopower. The novel's characterization of the male protagonists, its equation of purity with defense, and the manifestation of anxieties over reverse colonization and degeneration frame *Dracula* as military medical narrative. The allusions to and framings of "the old," for both Dracula and the Crew of Light, reference imperial, religious, and nationalistic military discourses. By contrast, the medical techniques and knowledge the protagonists employ represent the modern aspect of their work against the vampire threat facing England. In the tension between the ancient and military and the modern and medical, the martial metaphor codes national and imperial threats of biological origin.

The male protagonists who aim together to protect their women from vampires frame their undertaking as a medical war, characterizing each other as soldiers. When Dr. James Seward is unable to diagnose Lucy Westenra, he calls on his mentor Van Helsing, whom he describes in militaristic terms: the Dutch physician has “an iron-nerve, a temper of the ice-brook, an indomitable resolution, [and] self-command.”¹⁶ “Temper of the ice-brook” is a misquotation of the description of the sword Othello uses to commit suicide: “a sword of Spain, the ice-brooks temper . . . a better never did itself sustain upon a soldier’s thigh.”¹⁷ The reference to a military commander signals Van Helsing’s role in the Crew of Light. The play on *temper* suggests that Van Helsing’s affect is cold and hard—clinical—and that his mettle is as strong as tempered steel. These are ideal qualities for both the physician and the soldier, who must make hard choices about life and death—in this case, whether to perform an experimental blood transfusion and whether to decapitate a woman’s undead corpse. The framing of Van Helsing as a stoic, courageous soldier prefigures his ability to prescribe Lucy’s posthumous mutilation with callous, clinical efficiency. And after diagnosing vampirism, Van Helsing contends that they will fight Dracula like a military adversary: “We shall all be informed as to facts, and can arrange our plan of battle with this terrible and mysterious enemy” (*D*, 208). Most of the rest of the novel details the logistics and drama of the Crew’s efforts to contain and eliminate the vampiric threat. The

¹⁶ Bram Stoker, *Dracula: Authoritative Text, Contexts, Reviews and Reactions, Dramatic and Film Variations, Criticism* (New York: W. W. Norton, 1997), 106. Hereafter cited parenthetically in the text as *D*.

¹⁷ Michael Neill, *Othello: The Moor of Venice*, The Oxford Shakespeare (Oxford: Oxford, 2006), 390. Spanish swords were famously well made, a process that was, ironically, perfected while the Spanish were trying to expel the Moors from Spain. The strength behind the tempering of the swords was attributed in part to the “nature of their rivers,” presumably the temperature.

narrative construction of the battle against their “enemy,” reiterated throughout the novel, is built in part on the history of the military ethos through which the Crew fashion themselves.

The martial self-identification of the doctors and professional men¹⁸ working against Dracula draws from military history, medieval romance, and the mythos of knighthood. Van Helsing likens the group to a noble military force: “the old knights of the Cross. Like them we shall travel towards the sunrise; and like them, if we fall, we fall in good cause” (*D*, 278). Putting it in these terms justifies the means they take to their ends under a binary logic of good versus evil, and enfolds their contest in a nationalist ethos. The “cross” here is St. George’s flag, a component of the Union Jack, which was an icon adopted during the Third Crusade when St. George was exalted as warrior saint.¹⁹ George, as the patron saint of England, is also a fitting military reference: he was Roman soldier martyred for refusing to deny his Christianity and was mythologized in medieval romance for slaying a dragon.²⁰ The use of the red cross, in the context of the spiritual and military rhetoric framing the Crew’s “campaign,” also alludes to the Crusaders’ retaking of the Holy Land from Islamic rule. In this way, John Twyning suggests,

¹⁸ On middle-class professionals and *Dracula*, see Nicholas Daly, “Incorporated Bodies: Dracula and the Rise of Professionalism,” *Texas Studies in Literature and Language* 39, no. 2 (1997).

¹⁹ The red cross became an icon of the Crusades after the thirteenth century. While acknowledging that it served as a standard for other nations such as France, Victorian historians addressed the fact that it was an early emblem of English culture. George Proctor writes, “The red cross of St. George was our early national emblem, and still proudly floats on the banner which ‘a thousand years has braved the battle and the breeze.’” George Proctor, *History of the Crusades: Their Rise, Progress, and Results* (London and Glasgow: Richard Griffen and Company, 1854), 14.

²⁰ A clear analog of Dracula in the novel, his association with evil, and his etymological origin in Vlad II’s taken name *Dracul*, or “Order of the Dragon.”

“*Dracula* becomes the occasion for the characters to forge their own associations with history through the re-enactment of a popularly circulated version of the ancient or mythic past.”²¹

Reviewers of the novel were also keen to point to its anachronistic qualities, one suggesting that Stoker’s story “would have been more effective if he had chosen an earlier period. The up-to-dateness of the book—the phonograph, typewriters, and so on—hardly fits with the medieval methods which ultimately secure victory for Count Dracula’s foes.”²² However, I suggest that the anachronisms are quite suited to the cultural work of the martial metaphor, as they allow the Crew to respond to Dracula’s military history. For example, the route they take to track Dracula back to his homeland continues the Crusading narrative. While Dracula leaves London by ship, on the *Czarina Catherine*, the Crew of Light travel by the modern rail, following the route of the Orient Express, which opened in 1883 and became a popular tourist attraction to the “mysterious East.” But centuries earlier, Northern European crusaders took the same route to reclaim the Holy Land.²³ This conclusion to their mythic narrative reinscribes the story of the Anglo-British colonizers overtaking the threat of reverse colonization, this time instigated by Dracula.²⁴ They chase the vampire home and invade his territory, taking back Mina, whose body is itself a battlefield between the Count and the Crew, from foreign telepathic control and parasitic colonization.

²¹ *Forms of English History in Literature, Landscape, and Architecture* (Houndmills: Palgrave Macmillan, 2014), 214–5

²² “Recent Novels,” *The Spectator*, 31 July 1897, 151.

²³ Twyning, *Forms of English History*, 214.

²⁴ Patrick Brantlinger, *Taming Cannibals: Race and the Victorians* (Ithaca: Cornell University Press, 2011), 67. See also Daniel Pick, *Faces of Degeneration: A European Disorder, C.1848–C.1918* (Cambridge; U.A.: Cambridge University Press, 1999).

The representation of the Crew's mission as a Crusade serves as a counterbalance to the Count's centuries-long maturation in the military arts. As the target of the Crew's military campaign and epidemiological investigation, Dracula is a formidable antagonist. In Van Helsing's own words—signaling a direct opposition to his “temper of the ice-brook”—the Count is “hard and warlike . . . [having] more iron nerve, more subtle brain, more braver heart, than any man” (*D*, 278). He also has considerable experience with political and military strategy and tactics, as he was “in life” a “soldier [and a] statesman” (*D*, 263). And beyond general militarism and bellicose masculinity, the Count's family history informs his martial prowess. Dracula's country has been a literal battleground for centuries. In fact, most of our initial information about the Count pertains to his military lineage:

“We Szekelys have a right to be proud, for in our veins flows the blood of many brave races who fought, as the lion fights, for lordship. . . . Here, in the whirlpool of European races, the Ugric tribe bore down from Iceland the fighting spirit which Thor and Wodin gave them, which their Berserkers displayed to such fell intent on the seaboard of Europe, ay, and of Asia and Africa too, till the peoples thought that the were-wolves themselves had come. Here, too, when they came, they found the Huns, whose warlike fury had swept the earth like a living flame, till the dying peoples held that in their veins ran the blood of those old witches, who, expelled from Scythia had mated with the devils in the desert. . . . What devil or what witch was ever so great as Attila, whose blood flows in these veins?” He held up his arms. “Is it a wonder we are the conquering race?” (*D*, 34)

Harker recounts pages of Dracula's genealogy in which the Count expounds further, giving away the secret of his age, as he speaks of the lineage embodied in his blood: “Was it not this Dracula, indeed, who inspired that other of his race . . . who, when he was beaten back came again, and again, and again though he had come alone from the bloody field where his troops were being slaughtered?” (*D*, 35). Dracula is a seemingly unstoppable military antagonist, related to Attila and compared to the Norse Berserkers, and can single-handedly take down an army. The Count's martial prowess and vampirism are related, entangled with his blood as a metonym for his lineage and pathogenesis. This combination makes him a dual threat: “Dracula's twin status as vampire

and Szekely warrior suggests that for Stoker the Count's aggressions against the body are also aggressions against the body politic."²⁵ In other words, Dracula is a biopolitical threat both to the individual woman's body, as in the cases of Lucy and Mina, and to the greater population, in precisely the manner of an infectious disease, as vampires "go on age after age, adding new victims and multiplying the evils of the world" (*D*, 190). Dracula threatens the nation not simply through direct destruction or taking of life, but through the catalyst of a degradation from within. It is in this sense that we can understand the relevance of his origin in perpetual invasion in his foregrounding of race.

The novel's equation of purity with defense conflates national and racial boundaries. Dracula's military history informs the viability of his racial invasion. As an inimical force, with his morbid vampirism as his weapon, Dracula is a "technology of monstrosity": a conflation of forms of otherness in his transgressions against English racial, sexual, class, and gender norms.²⁶ As Dracula comes from the East, it is no surprise that he colonizes the body of the aptly named Lucy Westenra. And in attacking the middle-class woman's body, Dracula parasitizes the primary site of reproduction of the British race, compromising the stock of future generations.²⁷ The framing of Dracula as invasion, pollution, and parasite stems in part from the anti-semitic association of vampires with the "East" in the novel. Metaphors of blood and of Jews as social parasites were prevalent in Victorian culture, especially in the 1890s. There are numerous signals of stereotypes and cultural myths associated with Jews in Victorian culture, such as his hooked

²⁵ Arata, "The Occidental Tourist," 630.

²⁶ Halberstam, "Technologies of Monstrosity," 335.

²⁷ Susan Zieger speaks to this as the Count's "revenge on the masculine vampire hunters by compromising their precious asset, the racial purity of their line of descent." *Inventing the Addict*, 215.

nose, hairy palms, and other “villainous” features, many of which are also associated with venereal disease.²⁸ These physical symptoms of race drew on the contemporary rise of eugenic science, perhaps the most visible iteration of biopolitics in the Victorian era. Eugenics was closely aligned with anti-semitism, as physical traits were taken as signs of criminality on the basis of the pseudo-sciences of physiognomy and phrenology; the Jew was, in Sander Gilman’s words, “medicalized.”²⁹

Dracula also borrowed from narratives describing the mixing of immigrants, often specifically Eastern European Jews, in the East End of London. Like the foreigner—especially the Jew, and unlike the true Brit—the vampire emerges from a “whirlpool” of race. The Jew was also often a stand-in for hereditary—reproducible—corruption, in the form of parasitism, criminality, weak constitution, sexual perversity, and other atavistic qualities that stood in contrast to the narrative of the British as pinnacles of evolution—a cultural myth that fostered the need for the martial metaphor, as we saw as early as Mary Shelley’s *Last Man*. Thus the new military threat is in part a danger to the biological vitality needed to maintain a national defense and expanding empire, a concern we will see reflected in Conan Doyle in the next chapter.

While *Dracula* does represent one specific racial anxiety, his racial mixture signals a biological otherness amalgamated. Thus in portraying a threat to the purity of the British as a race, *Dracula* mobilized the representation of racial difference as a medical disease. Eugenics, and the medicalization of race more broadly, drew on two of the most prominent narratives of decline in the nineteenth century: the related narratives of degeneration and reverse colonization.

²⁸ Halberstam, “Technologies of Monstrosity,” 337–39.

²⁹ “Sexology, Psychoanalysis, and Degeneration: From a Theory of Race to a Race to Theory,” in *Degeneration: The Dark Side of Progress*, eds. J. Edward Chamberlin and Sander L. Gilman (New York: Columbia University Press, 1985), 87.

As a number of scholars have suggested, especially regarding *Dracula* and other Gothic fiction, by the fin de siècle, the threat of degeneration of the “imperial race” loomed over Victorian culture.³⁰ Degeneration was the opposite of evolution, the “deterioration” or devolution of the human species. This was a prominent cultural and medical concern at the end of the century, following the publication of texts such as Max Nordau’s *Degeneration* in 1892 and the work of Cesare Lombroso, Herbert Spencer, and Francis Galton, the “father of eugenics.” This anxiety appeared as a central component of late Victorian Gothic works such as Stevenson’s *Jekyll and Hyde*, often in medical inflections that drew from disturbing implications of contemporary science.³¹ In *Dracula*, the Count, consistently with the novel’s temporal dialectic and blurring of conceptual boundaries, is both evolved and degenerate. He is “a brute” (*D*, 208) associated with animality—lions, bats, and rats—and, alluding to popularity of criminal anthropometrics, “is a criminal [that] has not a full man brain” (*D*, 296) but a “child brain”; yet Van Helsing also acknowledges his cunning to “be the growth of ages” (*D*, 209). The trope of animality works to transmute an unwieldy and violent natural force into the medical threat of degeneration, justifying the martial metaphor’s fostering of biological racism under the imprimatur of narratives about civilizing the primitive other, of the sort that appear in tropical medicine, which I expand on in the concluding chapter.

Much like *Dracula* in his simultaneous degeneracy and evolution, England is touted as being the pinnacle of modernity while suffering imperial decay. This is linked to the military’s

³⁰ Brantlinger, *Taming Cannibals*, 79; Kelly Hurley, *The Gothic Body: Sexuality, Materialism, and Degeneration at the Fin de Siècle* (Cambridge; New York: Cambridge University Press, 2004).

³¹ See Stiles, *Popular Fiction and Brain Science*; Hurley, *The Gothic Body*; and Andrew Smith, *Victorian Demons: Medicine, Masculinity, and the Gothic at the Fin-de-Siècle* (Manchester: Manchester University Press, 2004).

supporting role in imperial efforts. We can understand this connection through the conflation of the body and the country. Stoker aligns the biological threat to populations—both the individual biological and the social body—with the rhetoric of territorial invasion. Related to degeneracy were anxieties over “reverse colonization”: the civilized world falling to an incursion of primitive forces. This fear was expressed in terms of actual invasion, cultural decline, biological disease, and heredity; *Dracula* links all three of these registers through the figure of blood. The anxiety wasn’t just that foreigners would bring disease; it was that by mixing with the population, they would pollute the British race itself, leading to its degeneration. In the novel, for instance, Van Helsing claims that Dracula invades in the “wake of imperial decay.” The implication is that for Stoker, vampires are associated with eroding national defense “linked to military conquest and to the rise and fall of empires.”³² Thus, as in Shelley’s *The Last Man*, militarism breeds disease. But this conflation also rhetorically aligns medicine with war, producing a vicious cycle: empire must be defended in the face of its own decay. By highlighting the biological weakness of the British race through narratives of invasion, the novel encourages a nationalistic urgency about medical protection, and it then offers the martial metaphor as a response.

This battle over racially appropriate blood is waged between the Crew of Light and Count Dracula on two main fields: London and the middle-class woman’s body, evoking the connection between territorial and biological invasions. The population, and more specifically women’s fertility as a resource, is at stake. A great portion of the novel is concerned with the gaining and losing of ground. While Dracula wins the battle for Lucy’s body, he ultimately cedes the field in London and retreats to Transylvania. Similarly, when the protagonists invade his home territory

³² Arata, “The Occidental Tourist,” 627–29.

and eradicate the Count, he loses control of Mina's body, and she is able to fall back under medical control.

The first mode by which the crew fights Dracula is the modern, still-experimental medical procedure of blood transfusion, which is conceptually linked to weaponry in the form of Seward's lancet—an icon of pre-twentieth century medicine, connected to the humoral practice of bloodletting, which had fallen out of favor by the mid-nineteenth century. Etymologically, too, this instrument of the medical armamentarium has martial connotations: *lancet* is the diminutive of *lance*,³³ both the piecing weapon of war and the act of penetration with that weapon. The lancet counters Dracula's fangs as well: both are piercing instruments, both have the function of breaking the skin and aiding in the transfer of blood—albeit in different directions—and they are in effect pinned against each other over Lucy's body. While Dracula draws blood and introduces the vampirism-causing agent, the lancet restores racially appropriate blood to counteract the corrupting infection of the vampire. Early in the novel, Seward's nervous fiddling with the medical instrument foreshadows Lucy's execution with literal weaponry. In a letter to Mina, Lucy writes, “[Seward] was very cool outwardly, but was nervous all the same . . . and then when he wanted to appear at ease he kept playing with a lancet in a way that made me nearly scream” (*D*, 58). Though it is certainly odd that a psychiatrist would be carrying a device for bloodletting to a social meeting, his anxiety and fiddling foreshadow Lucy's blood transfusion—where the medical device does make Lucy scream—and her impalement and decapitation.³⁴ Before the male protagonists enlist the violent “medieval” methods that “ultimately secure victory,” as one

³³ *OED Online*, s.v. “lancet,” accessed December 10 2013, <http://www.oed.com/view/Entry/105422?redirectedFrom=lancet&>.

³⁴ John Greenway, “‘Unconscious Cerebration’ and the Happy Ending of Dracula,” *Journal of Dracula Studies*, no. 4 (2002), <http://blooferland.com/drc/images/04Green.rtf>.

reviewer noted, it is significant that they try to diagnose and treat vampirism in a medical capacity. Medical technologies, such as chloral hydrate, the hypodermic needle, and blood transfusion, are part of the larger up-to-dateness of novel, like the typewriter, the phonograph, and the Kodak.³⁵ Therefore, the medical acts as the modern pole opposing the bellicose force used against vampires and the association with the mythic history of the Crusades.

The connection between women's bodies and national territory is crucial, as the crossover between them reveals how the novel reflects the biopolitical work of the martial metaphor. *Dracula* presents the battle against vampirism in the form of both poles of biopower: the disciplinary techniques applied to individual bodies and the regulatory biopolitics of population, which together constitute race, nationhood, and security. On the one hand, Mina is emblematic of the disciplinary apparatus in trying to maintain normative Victorian femininity. She appropriately "confesses" the signs of Dracula's control over her and self-surveils under the auspices of hygienic discourse: "Unclean, unclean. I shall touch and kiss [Jonathan] no more. Oh that it should be that it is I who is now his worst enemy" (*D*, 248). Van Helsing and the others work to regulate the population at large by preventing the spread of vampirism. The two levels of biopower intersect as first Lucy's body and then Mina's becomes a metonym for the nation itself, and the battle takes the form of a defensive posturing to protect the British people as a race. The blood transfusion scenes entangle discourses of medical practice, racial purity (and consequently eugenic thinking), and sexuality in the form of war. Transfusion becomes an occasion for

³⁵ Zieger, *Inventing the Addict*, 212. Zieger suggests that the Crew's reliance on technology becomes mechanized and compulsive. This connection to addiction, dependence on technology, and the weakening of the English as a race is relevant to the medical aspects of British military history vis-à-vis anxieties of degeneration, as reliance on evolving military technology (the sniper rifle in the Boer War, as Conan Doyle notes, and the machine gun in World War I) became a preoccupation of military physicians and officers, who feared it weakened the martial prowess and fitness of enlisted men.

militarizing masculinity beyond the casting of a mere medical gaze; it becomes an opportunity to exercise force. The rhetoric of blood loss and sacrifice connects the martial with the medical, as when Arthur valiantly declares that he “would give every last drop of blood in [his] body” to save Lucy (*D*, 113).

Arthur’s blood also has martial connotations in older societal caste structures and power relations. As an aristocrat, he retains in his blood traces of the pre-modern era before the birth of biopolitics. That is, in Foucault’s terms, his blood still carries the symbolic value of a society in which power lay in the ability to spill blood through “the honor of war,” in the “sovereign with his sword,” and in the willingness to “risk one’s blood.”³⁶ This entire scene is subtended by the rhetoric of courage and martial violence, which imbues the action with the symbolic function of blood in the pre-modern world. The vampire itself is a figure of the feudal order and the “old world” in the cultural imaginary, as reflected in the opening scenes of the novel. And Arthur is very much risking his blood in both a material and a figurative sense: On one level, he risks his life through a relatively new medical procedure, one where medical efficacy and risk were not fully understood.³⁷ Blood transfusions were not made safe until the beginning of the twentieth century, making this scene heroic both martially and medically, which heightens the rhetoric of risk and courage. On another level, Arthur’s blood lineage is at stake in Lucy’s health and ability to procreate. This risk is compounded by the hypersexual, transgressive character she acquires after her vampiric infection.

³⁶ Michel Foucault, *The History of Sexuality, Volume 1: An Introduction*, trans. Robert Hurley (New York: Vintage, 1990), 147.

³⁷ Though blood transfusion had been attempted numerous times, effective anticoagulants were not identified until 1894, and, it was another 21 years before this discovery transferred over to mainstream practice. Transfusion was not really safe until the discovery of blood types in the early twentieth century. See P. Learoyd, “The History of Blood Transfusion Prior to the 20th Century, Part 2,” *Transfusion Medicine* 22, no. 6 (2012): 375–276.

Because of Dracula's nightly feeding, Lucy needs multiple transfusions from the entire group of men, including the foreigners Quincy and Van Helsing. Although Arthur's blood is prioritized because it is aristocratic, it is important that Quincy, Van Helsing, and Seward still fall into the Foucauldian model of an appropriate "race" through their bourgeois status and Anglo-Saxon origins—marking a shift from aristocratic blood superstition to bourgeois techniques of science and management, which we see the residue of in the novel. The transfusions' inefficacy suggests that British and even Anglo-European blood is not enough to keep Lucy alive; moreover, Dracula's vitality and later the undead Lucy's—their physical strength and resistance to common injury and disease—foil the declining biological viability of the British, which is succumbing to degeneration. This also speaks to the accumulation of specifically anxieties over degeneration related to military viability, as two years after the novel's publication the Boer War revealed the insalubrious constitutions of the working class that filled the ranks—an anxiety also evident in Conan Doyle, as I suggest in the next chapter. Although at the end of the nineteenth century we are indeed in the era of modern biopolitical governance—the era of making live and letting die rather than killing and allowing to live—the rhetoric of blood in this pre-modern idiom suggests that the martial metaphor retains the older mode of sovereign power based on war and violence, a state of exception that uses and shows force for coercive means. This historical baggage is further revealed in the way the novel reflects the CD Acts by punishing women for their sexuality.

Adding to this anxiety about British health is Lucy herself. While Lucy's sexual impropriety becomes vividly apparent post-infection, there are several indications, as others have pointed out, that Lucy is a "fallen woman" and a product of degeneration even before being corrupted by Dracula. This contextualizes the contemporary inflection of the kinds of imperial decay in which Dracula thrives. Lucy's behavior suggests a hint of promiscuity even before she is

hypersexualized as a vampire: she confesses to Mina that she wishes she could marry all three of her suitors, and this informs Van Helsing's later joke that this "sweet maid is a polyandarist" (*D*, 158). Moreover, her sleepwalking is a hereditary taint that makes her susceptible to Dracula,³⁸ as Mina notes that Lucy's father suffered from the same condition, appealing again to the purity of blood through familial lineage. Mina is so concerned that she manifests physical unease over the impropriety of Lucy's somnambulism: "My heart beat so loud all the time that sometimes I thought I should faint. I was filled with anxiety about Lucy, not only for her health, lest she should suffer from the exposure, but for her reputation in case the story should get wind" (*D*, 89). Lucy's medical and moral qualities before she becomes a vampire intimate that she is corruptible by Dracula because she is already corrupt, a condition that Stoker maps onto London itself, as I detail in the next section.

Lucy's sexual transformation into a vampire resonates with patriarchal medicine's attempt to control and discipline women's illicit sexuality for the purity of the race, a shift from a question of morality in Christian terms, although we still see remnants of that, to a kind of duty for race and nation; that is, to maintain sex for appropriate bourgeois reproduction. Lucy's affliction, then, can be read as a transformation from an appropriately virginal into a sexually transgressive woman; her illness parallels venereal disease in its "illicit nature of transmission and degenerative effect on her health."³⁹ Numerous passages highlight Lucy's corruption, most notably Arthur's recoiling in horror when she suggestively calls for him (*D*, 188).

Toward the end of the nineteenth century, heredity was increasingly medicalized as a concern under the influence of evolutionary theories, particularly with respect to disease and

³⁸ Willis, "Dracula and Disease," 316.

³⁹ Tabitha Sparks, "Medical Gothic and the Return of the Contagious Diseases Acts in Stoker and Machen," *Nineteenth-Century Feminisms* 6 (2002): 94.

degeneration, and illicit sexuality was one nexus between the two that emblemized this conflation. Once Lucy becomes undead, it is no longer just Arthur's bloodline that is at stake. There is a danger of vampirism compromising the entire population. Lucy enacts this threat by feeding on children in an inversion of appropriate Victorian motherhood. Medical control of women's sexuality then becomes another iteration that establishes how disease, both moral and physical, can be constructed to be an enemy of the population. She has become a "nightmare" with a "whole carnal and unspiritual appearance, seeming like a devilish mockery of Lucy's sweet purity" (*D*, 190). Van Helsing urges Arthur to let him perform the decapitation and impalement under the aegis of "a duty to others" (*D*, 184). The vampiric threat is to heredity through the pollution of bourgeois sexuality, corrupting the race and by extension the nation through continued degenerate propagation, as vampires "go on age after age, adding new victims and multiplying the evils of the world . . . and prey on their kind" (*D*, 190). I will return to the idea of propagation again in the sections on contagion and germ theory, as this kind of spread of disease was considered as a pathogenic form of reproduction.

Part of the medical war in *Dracula*, then, is the war between women's sexuality and the medical establishment, a relation noted by Sparks but also presented in a rhetorical construction in contemporary feminists like Josephine Butler. Van Helsing's duty to prevent the spread of vampirism justifies the martial and military rhetoric that allows for strict surveillance and punitive treatments. This form of power reveals the juridical qualities of the martial metaphor that we see in the public health legislation in the decades leading up to the publication of the novel.

The "Stimulating" and "Bracing" Work of the Contagious Disease Acts

The representation of women's sexuality in *Dracula* is informed by the Contagious Disease Acts, which answered a military need to control venereal disease. Lucy's aberrant sexuality as a

vampire—“the sweetness was turned to adamantine, heartless cruelty, and the purity to voluptuous wantonness” (*D*, 186)—is a form of rebellion against patriarchal medical control of women’s bodies—a pathological rebellion that the Crew of Light aggressively suppresses. Scholars often read this “wantonness” as a sexual autonomy that Lucy gains in lieu of her proper middle-class domestic reproductive function.⁴⁰ On Van Helsing’s orders, the Crew secures weaponry: knives and a sharpened wooden stake. Their work involves driving the stake through Lucy’s heart—a return to the piercing image of the lancet, reimagined now as a punishment. But while their action is bellicose in form, as they enter the tomb Seward reminds the reader that it is a medical endeavor: “To me a doctor’s preparations for work of any kind are stimulating and bracing” (*D*, 190). This “work,” the ritualized, medical, and violent attack on Lucy, evokes the military history of the CD Acts.

The CD Acts are perhaps the most emblematic material connection between military medicine and civilian public health. They are especially relevant to the larger argument of this dissertation—that the development and cultural purchase of the martial metaphor developed from military medical practices—because their origin lay in the health of enlisted men. The target, however, was the civilian women, and as many scholars have suggested, they were tied to long-developed anxieties and obsessions over women’s sexuality.⁴¹

⁴⁰ Tabitha Sparks, *The Doctor in the Victorian Novel*, 122.

⁴¹ Judith R. Walkowitz, *Prostitution and Victorian Society: Women, Class, and the State* (Cambridge: Cambridge University Press, 1980); Judith R. Walkowitz, *City of Dreadful Delight: Narratives of Sexual Danger in Late-Victorian London*, *Women in Culture and Society* (Chicago: University of Chicago Press, 1992); Pamela K. Gilbert, *Disease, Desire, and the Body in Victorian Women’s Popular Novels* (Cambridge, UK; New York: Cambridge University Press, 1997; repr., 2005); Steven Marcus, *The Other Victorians: A Study of Sexuality and Pornography in Mid-Nineteenth Century England* (London: Corgi, 1967).

In 1857, after the Crimean War, the Royal Commission on the Health of the Army noted an extremely high rate of venereal disease in the armed forces. Their concern was investigated by the Committee to Inquire into the Prevalence of Venereal Disease in the Army and Navy in 1864. The Commission did not call for anything like the CD Acts, but it did spur continued interest by surgeons and military and bureaucratic officials. By 1864, however, venereal disease was the cause of one-third of all cases of illness in the army,⁴² and this prompted more direct medical actions beyond gathering statistics. That year, the CD Acts were passed in an effort to protect the British military from the increasing rates of venereal disease, most notably syphilis. The 1864 act applied to eleven garrisons and docktowns across Ireland and England. In an entanglement between military officials, medical practitioners, police officers, and local and national bureaucracies, a regulationist system was enacted to control the spread of venereal disease by stopping it at its “source.”⁴³ The acts allowed for the compulsory examination, arrest, and detention of suspected sex workers. Plainclothes police officers would identify women as sex workers and require them to undergo a compulsory examination by a military surgeon. If a woman was found to be infected, she would be placed in a lock hospital for up to three months.

The 1866 act introduced a more overt system of surveillance and medical policing,⁴⁴ instituting periodic examination of all known sex workers. The 1869 act increased the length of detention, extended the system to five more districts, and increased its physical jurisdiction to a fifteen-mile radius outside each of the explicitly defined dock ports and garrison towns. Thus, by 1869, the acts were extended well beyond the “defined limits of exceptional legislation for the

⁴² Walkowitz, *Prostitution and Victorian Society*, 48.

⁴³ *Ibid.*, 76.

⁴⁴ I mean this simply in terms of police involvement in public health, rather than Foucault’s characterization of German cameralism. See Michel Foucault, *Security*.

military.”⁴⁵ Beyond concerns of venereal disease and sex work, the CD Acts represented a logical extension of medical legislative moral intervention into the lives of the poor—a continued development of the kind of middle-class-led sanitary reform we saw in Kingsley that drew from epidemiological concerns of the British military. In this capacity, the CD Acts continued to foster the medicalization of the social body.

The CD Acts worked as a form of medical policing, operating on the precedent of the continental and colonial system already implemented in Hong Kong and India and later brought to Malta.⁴⁶ The use of lock hospitals and CD Act–like policies in the colonies predated their domestic deployment, starting as early the 1850s.⁴⁷ In 1861, Lord Henry Storks secretly introduced into the British-controlled Ionian islands a requirement that every prostitute had to submit to an examination by an army surgeon or face three months imprisonment. This was an initial testing of biopolitical technologies in the colonies that would later be deployed in the homeland, an operation that David Arnold and Ann Stoler have characterized as “labs of modernity” and a practice reflected in Conan Doyle’s writings on the Boer War, as I discuss in the next chapter. Such a practice is contingent on military-supported colonial structures, and this colonial genealogy signals another of the many colonial legacies of the martial metaphor’s military history. Read in tandem with the proclivity for racializing the poor in colonial terms, as if they were distinct “race” from the English middle class,⁴⁸ this reflects the Foucauldian bifurcated

⁴⁵ Walkowitz, *Prostitution and Victorian Society*, 88.

⁴⁶ *Ibid.*, 78; Philippa Levine, “Venereal Disease, Prostitution, and the Politics of Empire: The Case of British India,” *Journal of the History of Sexuality* 4, no. 4 (1994). See also her more recent *Prostitution, Race, and Politics: Policing Venereal Disease in the British Empire* (New York: Routledge, 2003).

⁴⁷ Levine, “Venereal Disease,” 583.

⁴⁸ Gilbert, *The Citizen’s Body*, 38; Angelique Richardson, *Love and Eugenics in the Late Nineteenth Century: Rational Reproduction and the New Woman* (Oxford: Oxford University

divide, in which the struggle for the purity of the English race is turned inward on the population. The war for purity from “foreign” pollution developed from and reinscribed biological racism associated with classist and xenophobic anxieties of contagion, filth, and degeneration—distinct forms of “disease” in the nineteenth century, but which as we have seen were conflated with the help of the martial metaphor.

The direct control, arrest, and spectacularization of diseased sex workers by medico-military authorities under the CD Acts was juridical in nature, signaling the violent and military forms of power attached the figurative language of the martial metaphor. The use of military surgeons and local police and government organs to expose the hidden signs of venereal disease through medical examination translated these hidden medical signs into spectacle through registration, court proceedings, and quarantine. In this way, women were visibly marked for their transgressions. Although by the nineteenth century, modern biopower had replaced absolutist sovereign power as the primary mode of governance, perhaps best remembered in Foucault’s “spectacle at the scaffold,” it is crucial to remember that the juridical did not disappear, and the CD Acts were an instance of medicine mediating between the two.

In mandating the detention of women suspected of sex work, the CD Acts amounted to a quarantine measure, both in logic and in material application: the quarantine is the materialization par excellence of the martial metaphor. It operates by force (at times lethal), visibility of power and boundaries, and the state of exception. As Leopold Lambert has argued, “spaces of precaution” such as the military quarantine, operate much like “spaces of punishment”: sovereign power suspends individual freedom, and any building or any space can become a carceral quarantine.⁴⁹ The lock hospitals were quarantines, keeping infected sex workers away from civil

Press, 2003), 25.

⁴⁹ *Weaponized Architecture: The Impossibility of Innocence* (New York: DPR-Barcelona,

society. The very qualification of the word *hospital* with *lock* implied a social evil that put normative society in peril.⁵⁰ The lock hospital itself dates to early modern and medieval times, when they were used to confine lepers and prevent the spread of the disease and social panic.⁵¹ In the nineteenth century, sex workers supplanted the lepers of the eighteenth century, as syphilis became “the dreaded symbol of social contagion.”⁵² In their militaristic logic and material practices, the CD Acts waged an internecine war on selections of the civilian population. If, for Agamben, the concentration camp is the “hidden matrix” of modern sovereignty, then martial quarantine is, if more conceptually, the hidden matrix of public health. That is to say, the use of force and state of exception that is structured by military control is always operative. This reveals the military logic that wages an invisible war on the population, only occasionally emerging to display its violence openly but always containing that possibility—the state of exception that, as Agamben suggests, defines sovereignty. *Dracula* offers the rhetorical contribution of making the language of the martial metaphor available to portray governance available as a potentiality for war against elements of the population. Moreover, it allows the ability for a conflation of the internal and the foreign threat—for anyone who does not fit the prototype to be excluded from governmental protection—a rubric that can shift as necessary.

While I’m not suggesting *Dracula* was instructive in the same way as Kingsley’s work, which was more explicit, it did do the cultural work of making internecine war on the population thinkable in medical terms. The physical division of the quarantine forms the principle racism at

2012), 21–22.

⁵⁰ Maria Isabel Romero Ruiz, “Fallen Women and the London Lock Hospitals and by-Laws of 1840 (Revised 1848),” *Journal of English Studies* 8, no. 141 (2010): 147.

⁵¹ *Ibid.*

⁵² Walkowitz, *Prostitution and Victorian Society*, 59.

the core of biopolitical regulation and its imperative to make live and let die, creating imaginary racial boundaries that neutralize polluting infiltration. Although the quarantine remains a material possibility in public health, in the Victorian era as now, the boundaries it creates still shape the “productive” power of regulatory biopolitics.

The martial metaphor perpetuates and rhetorically underwrites the relation between war, sovereignty, and medicine by translating it from a material linkage to a figure of speech. For modern biopower, discipline and regulation are understood as non-violent and non-repressive—they are productive. It is precisely under this aegis that the metaphor functions as a mechanism of control. The martial metaphor, by operating on the production of this kind of subjectivity while obscuring its own enmeshment with quarantine, the military, and the state of exception, maintains its invisibility. Fiction like *Dracula* that frames disease as a monstrous military enemy inculcates this obfuscation in the form of a literary abstraction. In male protagonists’ containment of Lucy, as I elaborate on in the next section, and their treatment of Mina’s infection, Stoker’s novel indexes the juridical imperatives of the quarantine.

In the military logic and material practices of the CD Acts, women’s bodies became a kind of “enemy within” for the nation.⁵³ The CD Acts waged a war on the body of the sex worker. However, anxiety over sex work extended beyond the working class, as it was indicative of a broader fear of autonomous women’s sexuality in general, especially given that the repeal movement was led by middle-class women’s rights activists such as Josephine Butler. She discusses his rhetorical turning of the war inward on groups within the population in her 1871 extended essay “The Constitution Violated.” Regarding the CD Acts, Butler writes, “Until war be waged against impure men, as well as against impure women, it will remain impossible to define

⁵³ Ibid., 39.

prostitution. It is amazing to see in this unequal war waged against the weaker sex only. . . .”⁵⁴

The repeal movement, which succeeded in 1886, represented middle-class women taking back control of their bodies and sexuality from the medical establishment. *Dracula* shows patriarchal medicine’s response to this reclamation: the reinstatement of quarantine and explicit juridical punishment.

In the military’s war against syphilis, the casualties were the sex workers. Thus, the ill health of the enlisted man and the British social body were displaced onto women’s bodies. *Dracula* writes this fear of an epidemic of venereal disease, and by treating Lucy as the conduit of the disease, it parallels the punishing dynamic of the CD Acts.⁵⁵ In the discussions that led to the development of the CD Acts, the idea of introducing compulsory examination of enlisted men as the primary intervention was quickly dismissed as “detrimental” to morale.⁵⁶ And though the acts were not effective statistically,⁵⁷ their rationale had been to promote the health of enlisted men—not even for their own sake but for that of the expansion and defense of empire—at the expense of working-class and impoverished women; the acts ignored the economic conditions that often drove women to sex work and fostered the social determinants such as poverty that that negatively affected their health beyond venereal disease.

Lucy’s vampirism is a threat not just because of her sexuality; she also represents feminist movements that resisted medical military control of women’s bodies. The medical

⁵⁴ *The Constitution Violated: An Essay* (Edinburgh: Edmiston and Douglas, 1871), 91.

⁵⁵ Sparks, *The Doctor in the Victorian Novel*, 90.

⁵⁶ Frank Mort, *Dangerous Sexualities: Medico-Moral Politics in England since 1830* (London; New York: Routledge & Kegan Paul, 1987), 10–11.

⁵⁷ Kimeya Baker, “The Contagious Diseases Acts and the Prostitute: How Disease and the Law Controlled the Female Body,” *CL Journal of Law and Jurisprudence* 1 (2012): 93.

orthodoxy responded to the legal repeal of military medicine⁵⁸ by transfiguring the military aspects of this public health policy into a conceptual metaphor of battling disease more broadly. The novel reflects this: as a vampire with sexual agency, Lucy breaks free of medico-legal disciplinary control and flouts the self-regulatory behaviors imposed by the medical establishment. That sort of feminist activism was absorbed in the 1880s and '90s into the character of the "New Woman," a figure distinctly modern in her involvement in public issues and her effort to reform social, educational, political, and medical inequities, prompted by the sexual double standard that the CD Acts exemplified.⁵⁹ Thus, the weakening masculine control over women's bodies and gender scripts came to be defined in a medical capacity that demanded a military-like response. Unlike the treatment of Mina, in her hygienic and confessional mode, the military punitive response to Lucy's perverse sexuality, which transgresses well beyond promiscuity, ends in her impalement and decapitation. If Mina is the model of discipline, hygiene, and confession, the correlative image associated with Lucy is less the discipline of the military drill than the spectacle of violence, the state of exception, and the show of force associated with the quarantine. As I have suggested and will argue in the following section on contagion, quarantine was often ineffective—and remains so—yet still bespeaks the ability of medicine to enact states of emergency, where not only the rule of law is suspended for biological protection, but also the medical tenet of doing no harm. Moreover, it forms the material origin of the dividing practices of biopower.

Though Lucy's ritualistic mutilation has been read as sexual penetration, gang rape, and reassertion of heteronormative masculinity,⁶⁰ reading it in a medical idiom situates the older

⁵⁸ Sparks, *The Doctor in the Victorian Novel*, 117–19.

⁵⁹ *Ibid.*, 112.

⁶⁰ Christopher Craft, "'Kiss Me with Those Red Lips': Gender and Inversion in Bram

violence of juridical power and quarantine in the biopolitical logics of blood and population; it links martial violence with the racial imperative of public health that was narrated in Lucy's convalescence. The symbolism of penetration, in medical terms, echoes the opposition of Dracula's fangs by Seward's lancet and Van Helsing's hypodermic. Seward records the "stimulating and bracing" medical "work": Following the tenor of Van Helsing's "ice brook" martial temper, "Arthur took the stake and the hammer, and when once his mind was set on action his hands never trembled nor even quivered. . . . [He] placed the point over the heart, and as [Seward] looked I could see its dint in the white flesh. Then he struck with all his might" (*D*, 191). The lancet and hypodermic needle have shifted into the material weapon of the stake. The suggestion here is the underlying violence of the martial metaphor: the use of violence and the state of exception when metaphorical war, in the form of medical procedures like transfusion, fails. The ritual concludes with the simultaneous spectacle of purgation, following "the Thing"'s metamorphosing back into "Lucy as [they] had seen her in life," and her quarantine. Seward recounts how they "cut off the head and filled it with garlic . . . soldered up the leaden coffin, screwed on the coffin lid," noting too that "when the professor locked the door, he gave the key to Arthur" (*D*, 193). The soldering, screwing, and locking all operate on the logic of containment: though Lucy has been transformed back into a human corpse, head severed and thoracic cavity punctured, she is still sequestered under enforced detention. In the narration of punishment and quarantine of pathological sexuality, *Dracula* conceptually draws a connection between the use of force and public health and, more specifically, reflects the same connection in the punishment dynamic of the CD Acts.

Stoker's *Dracula*," *Representations*, no. 8 (1984): 121–22.

If, as Sparks suggests, Stoker's novel narrates the medical establishment's "seizing (back) control" of women's bodies following the 1886 repeal of the CD Acts, then in terms of the martial metaphor, the novel also reflects the way literature aided in this process. While the repeal had rescinded medical control of venereal disease through juridical mechanisms by the time *Dracula* was published, the martial metaphor remained as a way to perpetuate the same conflation of public health with national defense. *Dracula* encodes the conflated figure of the martial metaphor.

Considering how the novel reflects the politics of the CD Acts reveals how the martial metaphor sustained the linkages among national defense, degeneration, medicine, and the control of women's sexuality. *Dracula* shows how even in the modern era of regulatory biopolitics, the martial quarantine and the seemingly medieval threat of violence by the sovereign power remain the underlying structure of public health.

Immixing Etiology

We have seen how Shelley blurred the boundaries between contagion and miasma. Stoker takes the next step by including germ theory, and specifically parasitology, in his etiological mélange. Showing how Dracula's past associates him with antiquated forms of power and the military, and understanding the novel's violent response to the CD Acts, helps us understand the significance of *Dracula*'s representation of vampirism as disease. Stoker's use of dialectic, as we saw in terms of biopolitical governance, also appears in the way he conflates older disease theories with modern germ theory. A number of scholars have noted the blend of etiological theories in the novel.⁶¹ What needs attention however, is the fact that the vampire imbues political and military

⁶¹ Martin Willis has also noted that Dracula appears in the forms of contagion, miasma, and the germ. "Dracula and Disease." See also Taylor, *The Sky of Our Manufacture*; Choi,

anxieties of older disease models into the vital agency of germ theory. Moreover, the vampire amplifies the older models by adding their military logics and governmental practices to martial narratives derived from the British military's development of tropical medicine. Because Dracula is at once contagion, miasma, and microbe, each etiological valence does distinct cultural work in the novel's extended martial metaphor.

The novel's emphases on person-to-vampire contact, ship travel, animal imagery, and quarantine all contribute to structuring the Count as an agent of contagion. As I noted, it is hard to draw solid conceptual boundaries between the three disease etiologies—pre-germ theory contagionism poses a problem, for instance—and these rubrics are partly a product of historical inquiry. Nonetheless, a contagionism that either rejected environmental factors outright or focused only on contact between people was considered antiquated as a theory and a political movement even in Shelley's time—with a few exceptions, including typhus, smallpox, and venereal diseases like syphilis. Contagionism had dominated medical thinking toward the end of the eighteenth century and in the early years of the nineteenth with respect to epidemics.⁶² Yet the language and practices of then-dated disease theory recur throughout the novel.

At the most material level, vampirism is about pathological, physical contact; this subtends *Dracula's* contagionist component. As one reviewer of the novel noted, "Count Dracula is a vampire of the most malignant kind. The worst of it is he carries contagion with him."⁶³ In the novel, Van Helsing invokes the language of defense and contagion when he warns the other protagonists to "guard [them]selves from his touch" (*D*, 219). The reference to cleanliness when

Anonymous Connections.

⁶² Cohen, *A Body Worth Defending*, 179–80.

⁶³ *The Era* 7 (August 1987), quoted in Taylor-Brown, "'She Has a Parasite Soul!,'" 27, n8.

Mina vilifies her own person after intimate contact with Dracula speaks to dangerous transmission between bodies: “Unclean, unclean. I must touch and kiss [Jonathan] no more” (*D*, 248); Mina has been morally and physically corrupted.⁶⁴ As Nina Auerbach has noted, the doubling of *unclean* alludes to a passage from Leviticus (13:45), an Old Testament book dealing with legal, moral, and ritual practices involving cleanliness, impurity, and disease: “An the leper in whom the plague is, his clothes, shall be rent, and his head bare, and shall put a covering upon his upper lip and shall cry, Unclean unclean.”⁶⁵ Mina carries within her the potential to transmit her infection to Jonathan—both through touching, on the simple contagionist model, and through intimate oral and sexual contact. The sullied nature of this kind of contact is conveyed through the images of fluid exchange and sexual impropriety, now well established in scholarship on the novel. In this framing, Stoker associates vampirism with venereal disease, which even at the height of miasma theory was understood under the contagionist model, thus reiterating the novel’s relevance to the history of the CD Acts.

The “force” for containing contagionist disease which the Crew of Light deploy to control the circulation of vampirism is not only a form of ritualistic, juridical punishment, as described in the previous section; it works through the practical logic of quarantine, the primary method at the contagionist’s disposal. The conclusion of Lucy’s second death narrates containment, as I noted. But in addition to its symbolic function, the stake can be read as an apparatus of quarantine: its function is not to destroy the undead but to immobilize them.⁶⁶ If the

⁶⁴ Rod Elmond reads this as a sign of leprosy, as later in the novel the vampiric corruption becomes visible on her face. *Leprosy and Empire: A Medical and Cultural History* (Cambridge: Cambridge University Press, 2006), 134.

⁶⁵ Stoker, *Dracula: Authoritative Text, Contexts, Reviews and Reactions, Dramatic and Film Variations, Criticism*, 248, n6.

⁶⁶ *Ibid.*, 190, n6.

very idea of quarantine bespeaks the discourse of antiquity, the language of the conclusion of the Crew's work at the Count's Carfax hideouts follows the same logic, when Van Helsing "lock[s] the door in an orthodox fashion" (*D*, 223). Locking "in an orthodox fashion" connotes the conservative politics of contagionism and its medico-political methods: beginning in the mid or late nineteenth century, contagionism came to be considered overly politically conservative, and its method of quarantine antiquated and contrary to liberalism (both individual liberty and free trade), as I have discussed previously. Moreover, the historical mode of quarantine comes from its military implementation, the *cordon sanitaire*. In drawing on this disease theory, Stoker aligns vampirism with the threat of contagious contact from foreign bodies and indicates the physical force required to contain them.

In addition to instances of actual containment and of physically locking areas occupied by vampires, the circular image of the quarantine appears toward the end of the novel. In Transylvania, Van Helsing, with the complicity of the rest of the Crew, quarantines Mina after she displays signs of infection that are potentially injurious to the group and their strategies. He creates a visible barrier to confine her, outlined with a Eucharist wafer, and not only does it seem to protect Mina from Dracula, it provides a measure of security to the crew as well. But the very fact that the circle protects her makes her, in effect, a prisoner to it: "She could not [leave], none of those that we dreaded could [enter]. Though there might be a danger to the body, the soul was safe" (*D*, 316). Like governmental quarantines, this measure requires a willingness to sacrifice the infected for the sake of the greater good. In this case, the greater good is Mina's soul and, more importantly, her death being free of contagion. The quarantine operates as a counter to vampirism, another iteration of the trope of medical oppositions, as with the fangs and the lancet. Specifically, the quarantine counters Dracula's "ever widening circle of semi-demons [that]

batten on the helpless” (*D*, 52–3). The circular boundary of the quarantine delimits the widening circle of vampirism.

Quarantine is historically associated with travel by ship. In the history of the martial metaphor I have traced so far, this mode of medical intervention follows the connections Shelley draws between ships, contagion, and foreigners in *The Last Man*. The increased distance and frequency of ship travel, bringing with it goods and peoples from abroad, was a notable concern in England throughout the nineteenth century with respect to disease.⁶⁷ By contrast, anticontagionism was strongly opposed to quarantine measures and government interventions that interfered with free trade practices, like importing goods, and individual liberties. This was one of the reasons it became the dominant etiological paradigm. Dracula takes advantage of modern ship travel to make his way through England’s leaky borders, traveling aboard the *Demeter* in the infamous boxes of Transylvanian dirt. By the time Stoker was writing *Dracula*, maritime quarantine was even more “widely detested” and less frequently used than earlier in the century; an alternative model had been created in 1872, but quarantine practices in British sea ports were

⁶⁷ The history of quarantine shows the crossover between contagion and miasma theories, as Eugenia Tognotti articulates when describing the first implementations in Denmark (in 1377) and most famously Venice (in 1423). The word comes from the Italian *quaranta giorni*, “40 days,” which was the most often prescribed period of quarantine. “Lessons from the History of Quarantine, from Plague to Influenza A,” *Emerging Infectious Diseases* 19, no. 2 (2013): 254–55. Britain’s history of quarantine, however, goes back further than the nineteenth century. The naval quarantine, although implemented at various times was not adopted systematically until the eighteenth century. The Quarantine Act of 1710 was a response to the high incidence of plague in the Baltic Sea region during the Great Northern War (1700–20), instituting minimum periods of quarantine for “persons or merchandizes coming from places infected” with the plague, such as Sweden and Denmark. This was a military problem, however, as England depended on imports such as hemp and flax for the navy. Mark Harrison, *Contagion: How Commerce Has Spread Disease* (New Haven: Yale University Press, 2012), 27. See Krista Maglen, “The First Line of Defence: British Quarantine and the Port Sanitary Authorities in the Nineteenth Century,” *Social History of Medicine* 15, no. 3 (2002).

abolished completely in 1896.⁶⁸ By narrating this model of travel, Stoker ties Dracula to older conceptions of disease and antiquated means of mitigating it. Moreover, Stoker attaches the stigma of disease to the foreign, highlighting the invasive quality of the vampire as contagion. The martial metaphor, the Crew of Light's "battle against this terrible and mysterious enemy," becomes a seemingly natural narrative to deploy.

Linked to the discourse of quarantines are the images of and allusions to plague in the novel. Plague was still present in the late Victorian era, but it was mostly confined to colonial and tropical locations such as India. Thus, Stoker links the novel to the pre-modern, undeveloped world, and follows out the anxiety of reverse colonization. The older disease theory works as an analog to an older, less civilized population, personified in the Count himself. Moreover, plague's foreign presence in the modern Victorian era notwithstanding, the very mention of it connoted medieval epidemics. It would make sense, then, given Dracula's antiquated and feudal origins and the mythic narrative of the Crew, for Stoker to associate him with an Old World disease. In tracing the arrival of Dracula's boxes via ship at Carfax, the male protagonists encounter a swarm of rats, which Van Helsing later informs them are under the Count's control. They find that the house suddenly "become[s] alive with rats . . . multiplying by the thousands" (*D*, 222). The propagation of the rats, the spread of "the mass," reflects the rapid expandability of contagious disease in the industrial, urban, and global nineteenth century, a transmission that is determined by person-to-person contact but also, as I argue below, by the self-replicating capability of contagious disease itself under the germ model. As with the idea of quarantine in a fin-de-siècle novel, rats signal "the incursion of the past into the present."⁶⁹ The relationship between rats and

⁶⁸ Maglen, "The First Line of Defence," 415.

⁶⁹ Maud Ellmann, *The Nets of Modernism: Henry James, Virginia Woolf, James Joyce, and Sigmund Freud* (Cambridge: Cambridge University Press, 2010), 19.

vampires is one of primitivism. But though they are both images of the archaic and less-evolved, they also both thrive in the festering conditions of modern industrial England. Thus, Dracula exercises his “primeval power with the modern know-how of the modern rat,” infiltrating contemporary transportation and postal networks. Rats are also associated with medieval plague,⁷⁰ and while this connection with germs—specifically *yersinia pestis*, plague—does not fit precisely into the history behind Stoker’s writing of *Dracula*, the link does resonate with mythologies that persisted in the cultural imaginary. Rats were associated with plague in ancient medicine and in folklore for centuries; closer to the time of *Dracula*, the notion recurs in Goethe’s short poem about the Pied Piper clearing the rats from a town.⁷¹ In this way of thinking, a community could just as easily keep people out as it could rats; the filth of rats creates the metonymic connection between the poor and the foreign, making them a part of their insalubrious environments and subhuman.

The presence of rats suggests that Dracula is not only a contagion but also a miasmatic infection, as rats in Victorian England emblemized dirt and filth.⁷² Miasma theory, broadly speaking, attributed disease to the local environment: it was associated with “bad air” or noxious, polluting vapors that emanated from the land itself, odor, or dead and putrid matter—or a

⁷⁰ *Ibid.*, 20.

⁷¹ Iqbal Akhtar Khan, “Plague: The Dreadful Visitation Occupying the Human Mind for Centuries,” *Transactions of The Royal Society of Tropical Medicine and Hygiene* 98, no. 5 (2004): 273. The bacillus was discovered in 1894, but the role of rats was not recognized until 1898, one year after the novel was published.

⁷² Christopher Herbert, “Rat Worship and Taboo in Mayhew’s London,” *Representations*, no. 23 (1988): 15. Herbert’s reading also indicates that rats were associated with the taboo, primitive, and sexual, and the belief that they consume and produce filth. Consistent with the blurry boundaries between disease theories, it is also important note both the contagious and the miasmatic qualities of the rat, especially in Mayhew: Rats have the ability “to communicate uncleanliness to whatever they [touch].” *London Labour and the London Poor*, 4 vols., vol. 3 (New York: Dove, 1861–1862; repr., 1968), 6. See Herbert, 14.

combination of the three, as in the zymotic theory of disease.⁷³ And Stoker was very likely well-versed in medical science, given his family's experience in the profession. Most critics believe that he consulted his brothers, both of them medical practitioners, while writing the novel.⁷⁴ Stoker himself would have been quite aware of the discourse on miasma given his mother's experience with cholera, perhaps the most emblematic discourse of anticontagionism. Stoker's mother, Charlotte, told her children "horror stories" about the cholera outbreak in Sligo, Ireland, which would have been understood in miasmatic terms, and Stoker later suggested that such stories influenced his conceptualization of vampiric pestilence.⁷⁵

The novel's most acknowledged allusion to miasma—Seward uses the term explicitly—is through the boxes of Transylvanian dirt that keep the Count safe. In general, the pathogenic environments were those occupied by the working class and the impoverished, Dickensian locations. This connection, however, also bespeaks the racialization of the lower classes in terms of diseased lands and environments: Dracula and his boxes of earth are a literal spillover of polluted "Oriental" lands into England. This symbolically pollutes English territory while at the same time suggesting that England is already polluted. The Count's salient miasmatic characteristic is his protean ability to shift into a mist. There are numerous instances of Dracula as a mist-miasma, as a noxious odor, and as pathogenic particulate matter floating through the air. For

⁷³ See Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865–1900*, Cambridge History of Medicine (Cambridge: Cambridge University Press, 2000), ch 1. See also Erwin H Ackerknecht, "Anticontagionism".

⁷⁴ Carol A. Senf, *Science and Social Science in Bram Stoker's Fiction* (Westport, CT; London: Greenwood Press, 2002), 22.

⁷⁵ Raymond T. McNally and Radu Florescu, *In Search of Dracula: The History of Dracula and Vampires*, New, updated, and rev. ed. (Boston: Houghton Mifflin Co., 1994), 137.

example, in Harker's journal, specks of matter in the air announce the vampire's arrival.⁷⁶ Similarly, Lucy is infected by a "whole myriad of little specs." Mina sees "a thin streak of white mist" creeping toward their lodging (*D*, 226), and after Seward and Van Helsing see the illicit contact between Dracula and Mina, they try to get a better look by lighting a match but see "nothing but a faint vapour" (*D*, 247). Beyond the visual signs of miasma, the telltale olfactory offense emanating from putrefaction and filth characterizes Dracula as a bad air, following the Chadwickian logic that "all smell is diseases,"⁷⁷—more so if we take into account Harker's specific mention of the Count's "rank" breath early in his journal account of their meeting (*D*, 24).⁷⁸ Seward mentions that the Carfax Abbey house, in particular, emits an "earthly smell, as of some dry miasma" (*D*, 221). As with the dirt in the boxes, vampirism is linked to insalubrious environments.⁷⁹ Harker hyperbolizes this when says that the odor "was composed of all the ills of mortality and with the pungent, acrid smell of blood, but it seemed as though corruption had itself become corrupt" (*D*, 221). The implication is that Dracula emerged from the miasmatic corruption already in England. On the one hand, this allows for the exclusion of the foreign that would make a degrading situation worse; on the other, it fosters the idea of a productive power through

⁷⁶ Willis, "Dracula and Disease," 311.

⁷⁷ Edwin Chadwick, "Metropolitan Sewage Committee Proceedings," in *Parliamentary Papers* (London: HM Government Printer, 1846), 651.

⁷⁸ This would follow contingent contagionism, which suggested that people could carry noxious miasma on their person and in their lungs, as we saw in the case of the "negro half clad" in *The Last Man*.

⁷⁹ A number of these instances of miasma have been cited by scholars. See Taylor, *The Sky of Our Manufacture*; Willis, "Dracula and Disease"; and Laura Sagolla Croley, "The Rhetoric of Reform in Stoker's 'Dracula': Depravity, Decline, and the Fin-de-Siècle 'Residuum,'" *Criticism* 37, no. 1 (1995).

discipline and regulatory biopolitics in the form of sanitation. In other words, it encodes both modes of “defense” for the sake of national purity.

While blood remains in the subtext of the entire novel, its mention in the context of Dracula’s miasma relates the notion of the penetration and pollution of the interior of the body to that of a corrupt and putrefied environment. The gaseous nature of disease in this view supports an emphasis on problems of filth and ventilation. Dracula’s taking the form of miasma motivates the disciplinary and biopolitical regulation of the population through sanitation. Recalling the martial through-line of Kingsley’s work, the middle-class sanitary movement promoted cleaning drills and hygiene protocols among the working class, which instilled individual discipline in and surveillance of subjects. In this way, the Crew of Light is associated with the social reforms of the sanitary movement, yet unlike Kingsley’s characters they retain the juridical and coercive force of contagionism. We see them work with the curative means of ventilation, for instance, when they open the chapel door at Carfax and feel “the purifying of the atmosphere” (*D*, 223). Laura Croley characterizes the miasma of this locale as a kind of “low lodging house” or rank slum reminiscent of places visited by social reformers,⁸⁰ which associates the Count’s lodgings with the modern entropic processes of urbanization, industrialization, and empire. This validates Arata’s contention that vampires are not the cause but the effect of imperial decay and the conditions of late Victorian London.⁸¹ The degenerate and archaic is in fact much more at home in the polluted air of London.⁸² It is the circuits of capital and international trade across the empire that allow Dracula and his boxes of dirt to make their way to England. London, in effect,

⁸⁰ “Rhetoric of Reform,” 88.

⁸¹ Arata, “The Occidental Tourist,” 629.

⁸² See also Taylor, *The Sky of Our Manufacture*, 129.

provides a breeding ground for Dracula's miasma; the boxes of his filth are pre-modern dirt, or in the language of Chadwick and Mayhew, urban and insalubrious filth—what today we might call an opportunistic infection. On the one hand, this criticizes England as already diseased before the foreign infiltration; on the other, the anxiety itself is fostered to promote defense as a curative means. This is the kind opposition we saw in an early form in *The Last Man*; however, Stoker's use of horror and spectacle channels the fin-de-siècle medical and social anxieties less as critique and more as promoters of the martial metaphor.

Given the discussion of pollution and filth vis-à-vis miasma, even though I have used the rubrics of both contagionism and anticontagionism to show how Dracula operates as a disease, a number of examples of Dracula as contagion can also be read as miasmatic. Mina later parrots her pronouncement of her own uncleanliness in the language of filth rather than contagion: "Unclean! Unclean. Even the almighty shuns my polluted flesh" (*D*, 259). Moreover, the contagion associated with ship travel also carries the portent of bad air. Dracula's arrival by ship is followed by miasmatic imagery much like that of the "turbid cloud" that envelops Constantinople in *The Last Man*:

Masses of sea-fog came drifting inland—white, wet clouds, which swept by in ghostly fashion, so dank and damp and cold that it needed but little effort of imagination to think that the spirits of those lost at sea were touching their living brethren with the clammy hands of death, and many a one shuddered as the wreaths of sea-mist swept by. At times the mist cleared, and the sea for some distance could be seen in the glare of the lightning, which now came thick and fast, followed by such sudden peals of thunder that the whole sky overhead seemed trembling under the shock of the footsteps of the storm. (*D*, 77)

While London itself is polluted with fog—both industrial and natural—this particular fog recalls the "oppressive" and "thunderous" atmosphere that Harker sees overlooking Dracula's castle. As Jesse Oak Taylor suggests, "Dracula rides the thunderous atmosphere to Britain's shore,"⁸³

⁸³ *Ibid.*, 127.

recalling Van Helsing's claim that Dracula can control "storm" and "fog" (*D*, 209). As with the invocation of contagion, the discourse of miasma in *Dracula* invokes the temporal disjunction but also points to how modern germ theory hasn't so much disproven contagion and miasma theory. Rather, Stoker is showing, germ theory conceptually brought contagionism and miasma theory together. Theories about race and xenophobia can explain why Stoker held on to the earlier disease models: foreignness, contagion, and pollution come together into a disease agent that is both alive and can reproduce—is a member of its own race.

With the contagionist and miasma-like valences of the Count in view, we can better understand how Stoker was responding to germ theory by making the Count a parasitic disease. By the 1880s, germ theory had imbued disease with vital agency. In *Dracula*, Stoker used the vampire to represent infectious disease as "an active, intelligent agent that attacks the body."⁸⁴ By bringing the medical and political movements of contagionism and anticontagionism together through the metaphor of war, he sublimated the anxieties and treatment protocols of each into an intensified form of medical war, mobilized against a living enemy. The idea that diseases are caused by living organisms rather than inanimate chemicals or vapors gave exigency to the martial metaphor because it made disease a living agent that penetrated the boundaries of the hermetic, liberal subject.⁸⁵

Mapped onto the national body, bacteria themselves became a prominent expression of reverse colonization, and in many tropical medicine texts, for instance, descriptions of bacteria and native populations are conflated.⁸⁶ This identification helped develop the narrative of foreign

⁸⁴ Willis, *Vision, Science, and Literature*, 18.

⁸⁵ Otis and Choi have made similar arguments about the reproductive and penetrative qualities attached to germ theory. Choi, *Anonymous Connections*, 133–35; Otis, *Membranes*, 5.

⁸⁶ Jørgensen Jens Lohfert, "Bacillophobia," 40. See also Willis, "Dracula and Disease."

bodies, especially those from the colonies, both bringing disease themselves and metaphorically being a disease that corrupted the British social body, which facilitated the racialization of the lower classes. The images of polluted environments, metonymically linked to the people occupying them, helped create the us-versus-them divide that was so conducive to military thinking. Consider Mary Douglas's well-known contention that "filth is that which is outplace" in the context of Anne McClintock's reading of Victorian soap: "Cleaning creates meaning through the demarcation of boundaries."⁸⁷ These kinds of slippery figurations compound the muddling of metaphor and material reality that occurs when medicine is thought through the conceptual domain of war. Given the countless images of boundaries and their penetration in the novel, we can read pollution as an intrusion into the demarcation of what was worth defending in Victorian Britain: the middle-class body. As we saw with Kingsley, miasma itself contributed to the martial metaphor through the objectification of force outside the body and threatening its hygienic boundaries. In his reflection on germ theory, Stoker developed the defense of national and imperial membranes while keeping the language and history of contagion and miasma theory.

Like the descriptions of Dracula that can be read in terms of both contagion and miasma, so too can many of these etiological ambiguities be understood in terms of germ theory. Mina's dream, in which Dracula appears as a miasmatic "white mist," includes an additional construction that signals vital agency: "Not a thing seemed to be stirring, but all to be grim and fixed as death or fate; so that a thin streak of white mist, that crept with almost imperceptible slowness across the grass towards the house, seemed to have a sentience and a vitality of its own" (*D*, 266). The fact that the vampiric miasma has both "sentience" and "a vitality of its own," self-awareness and ontologically discrete life, in addition to the agency to direct its own movement, speaks to the

⁸⁷ Mary Douglas, *Purity and Danger*; Anne McClintock, *Imperial Leather*, 170. See also Taylor, *The Sky of Our Manufacture*.

kind of inimical malevolence that fiction like *Dracula* helped inculcate into lay audiences. Later, when Harker is disturbed by the idea of bringing Mina with them as they chase Dracula back to his castle in Transylvania, he voices an objection subtended by the rearrangement of the ontological order of things wrought by germ theory: “Have you seen that awful den of hellish infamy—with the very moonlight alive with grisly shapes, and every speck of dust that whirls in the wind a devouring monster in embryo?” (*D*, 307). The embryological metaphor personifies the particulate matter of filth and miasma,⁸⁸ but also, given the embryo’s association with growth, evokes the danger of vampirism’s capacity for mass reproduction.

The connotations of birth and growth here develop the preoccupations about microbes because, like other organisms, microbes reproduce themselves. This kind of thinking does follow the anxieties of contagion insofar as contact between people multiplies the spread of infection; but contrary to contagionism, microbes such as bacteria actually have a life of their own. In fact, the sheer sublimity of their numbers adds an entirely new order of magnitude to the abstract conception of disease as an object external to the body. Van Helsing alludes to this when warning the Crew of the apocalyptic potential of leaving Dracula unchecked: the vampires will multiply and “create a new and ever widening circle of semi-demons.” Both the “ever-widening circle,” which as I mentioned is a product of contagion theory, and the discourse of multiplicity imbue a statistical, epidemiological quality to vampirism that equates microbes with entire populations, thus connecting the discourse of invasion, colonization, and overtaking with germ theory. The

⁸⁸ In the mid-century, microscopists would identify particulate matter in miasma in filth, which they gave the quasi-organismic label “animalcule.” Willis, *Vision, Science, and Literature*, 20.

danger of microbial—or vampiric—reproduction is that, as Susan Zieger suggests, it is “geometrical”: it outstrips the rate of human reproduction.⁸⁹

The connection of the invasive, mass, and foreign aspect of microbes with the nation, colony, and empire speaks to a more specific inflection of *Dracula*’s engagement with germ theory: parasitology. This sub-field of microbiology grew out of tropical medicine, especially during the “scramble for Africa,” as I discuss at length in the concluding chapter, and was intimately entangled with military infrastructure, providing biomedical support for the military’s presence in India, Malay, and parts of Africa. It is thus the second instance of military medicine that Stoker is responding to and allegorizing in the anachronistic medico-military war against the Count. Stoker develops the logics of invasion, colonization, and racialization, evident in the three disease etiologies, in the discourse of tropical medicine through the figure of the parasite. Tropical parasites were one of the most formidable obstacles to European colonization, especially malaria, which informs the nature of the vampire as germ.

The sanguine transmission of malaria resonates with the way blood operates in the novel. Indeed, the disease most relevant to both tropical medicine specialists and the public’s perception of the field may be malaria. While the malarial parasite’s lifecycle was not discovered until 1897, the year of *Dracula*’s publication, the association between the insect, blood, and malarial fever was already circulating in the public imaginary. Patrick Manson had connected the mosquito to malaria in 1877, and in 1887, Albert King published an article in the *American Popular Science Monthly* on Charles Laveran and Patrick Manson’s 1884 work on mosquito vectors and malaria.⁹⁰

⁸⁹ *Inventing the Addict*, 229.

⁹⁰ Taylor-Brown, ““She Has a Parasite Soul!”” 27, n6. See also Douglas Melvin Haynes, *Imperial Medicine: Patrick Manson and the Conquest of Tropical Disease* (Philadelphia: University of Pennsylvania Press, 2001).

Therefore, Dracula's parasitic qualities such as feeding on the human organism would have been received through this popular understanding of parasitism. For instance, Van Helsing observes, "He can flourish when . . . he can fatten on the blood of the living," much like the mosquito grows noticeably larger during its feeding. Harker sees him, after feeding, "gorged with blood. He lay like a filthy leech" (*D*, 52), analogizing him to one of the most emblematic of parasitic organisms—and one well-known before tropical medicine—and in this way bringing the longer history of parasitic images into the era of microbial plasmodia.⁹¹

Several similarities between the vampire and malaria link the fight against Dracula with the military narratives of tropical medicine specialists, which I describe in the concluding chapter. Taylor Brown has demonstrated the pathological and physiological connections between malaria and the Count's mechanisms of infection. The vampire's fangs resonate like the mosquito's proboscis, its elongated, needle-like mouth, a mechanism that King had theorized as a possible explanation for how germs infect the cells.⁹² The Count's power to transform into animals resembles the vector-born transmission of parasites that pass through intermediate hosts, as malaria uses the mosquito to infect humans. Finally, vampirism, in its blood transmission and association with foreign infiltration, would have resonated with British travelers, soldiers, and sailors returning from the colonies infected with malaria.⁹³ This is what makes it specifically parasitic and not just a disease brought by foreigners: it will incubate and replicate inside the

⁹¹ While leeches were historically used for medicinal purposes, by this time bloodletting and especially the use of leeches had fallen out of favor.

⁹² "Insects and Disease: Mosquitoes and Malaria," *Popular Science Monthly* 23 (1883): 644. See Forman, "A Parasite," 935.

⁹³ Taylor-Brown, "'She Has a Parasite Soul!'" 13. More recently, Ross G. Foreman has made similar and more specific claims related to tropical medicine interest in parasites vis-à-vis the novel's "textual parasitism." See "A Parasite."

British body—like not only the material pathology of vampirism, which needs human blood, but also the metaphoric parasitism that Dracula enacts when he drains and colonizes British vitality at the very site of its reproductive futurism. However, in the context of what I have called an opportunistic infection—owing to London’s insalubrious environment and Lucy’s preexisting impropriety—and the male protagonists’ inability to restore health with Occidental blood, this suggests that Britain’s insalubrity allowed Dracula to parasitize the country.⁹⁴ Given the preoccupation with reverse colonization and the appearance of vampirism as fluid exchange,⁹⁵ this suggests that Britain has exhausted its strength elsewhere as an agent of colonial parasitism, in the kind of relationship Conrad figures in *Heart of Darkness* to critique the martial metaphor.

The body of the parasite recalls the miasmatic qualities of the boxes of dirt, insofar as both involve purification, decay, and filth—the “*filthy* leech.” This connects the figure of the vampire with the pathogenic environment of the East,⁹⁶ such as India and the parts of Africa colonized by European powers like Britain, France, Germany, and Belgium. Before the advent of quinine and other technologies of tropical medicine, areas like Africa were thought of as the “white man’s grave.” Reversing this idea, Dracula infiltrates England, bringing not only himself—the agent of vampiric transmission—but the pathogenic land he occupies. This can be understood in terms of anticontagionism and environmental etiology, this kind of thinking continued into the era of

⁹⁴ Both Jonathan’s and Renfield’s susceptibility have been read in terms of feminization. This decayed masculinity is conducive to masculine militarism and associated with the martial metaphor, as in Van Helsing’s call to arms: “A brave man’s blood is the best thing on this earth when a woman is in trouble” (*D*, 136). For a reading of this feminization in terms of carceral space, see Julie Smith, “Masculine Spatial Embodiment in *Dracula*,” *English Academy Review* 32, no. 1 (2015).

⁹⁵ I mean this in terms of the draining of vital energy associated with the discourse of the spermatic economy. On fluid in *Dracula*, see Jules David Law, *The Social Life of Fluids: Blood, Milk, and Water in the Victorian Novel* (Ithaca: Cornell University Press, 2010).

⁹⁶ Forman, “A Parasite,” 926.

parasitology. While tropical medicine specialists understood the ultimate cause of parasitic disease to lie in microbes like malaria's plasmodium and sleeping sickness's trypanosome, the humid and "primitive" environment was still the proximate cause that let them flourish. This logic is evident in the etymology of the word *malaria*: "bad air," associated with humidity and swamps where the mosquitos carrying the plasmodium would thrive.

However, as with the question of Lucy's predisposition to a metaphorical and material diseased state, the boxes' placement in filthy English environments collapses the boundaries between the foreign and the English; between the healthy and the sick. On the one hand, this construction criticizes England as already diseased before foreign infiltration; on the other, it fosters the anxiety to promote defense as a curative means. A rhetorical effect fostering a similar anxiety is evident in the work of Conan Doyle, as I suggest in the following chapter.

* * *

Understanding the bacteriological and parasitic qualities of the vampire, and the novel's engagement with germ theory more broadly, helps us recognize the way fiction and literature shaped the martial metaphor into something that exists in between metaphorical and material reality. A central part of the anxiety that germ theory provoked was the realization that microbial life could be everywhere and anywhere due to its infinitesimal size, which resonates with one of Dracula's metamorphic abilities: "He became so small—we ourselves saw Miss Lucy, ere she was at peace, slip through a hairbreadth space at the tomb door" (*D*, 211). Meanwhile germs were visible only through the microscope, and not always so easily at that. In this context, Willis suggests that disease objects as germs become "Gothic specters": they are anthropomorphized as agents while remaining hard to see even through a microscope.⁹⁷ The previous sections and the

⁹⁷ *Vision, Science, and Literature*, 23.

arc of this dissertation suggest that this was an essential development of the martial metaphor, and moreover that literature facilitated the metaphor's congruence with the disenchantment of infectious disease. That is, the metaphor at once rationalized and secularized disease to the point that it was no longer a magical, divine, or unintelligible force, yet allowed it to retain a fictional, or as Willis puts it "phantasmagoric," aspect. Indeed, speaking of phantasmagoria in visual technologies like the magic lantern, Terry Castle suggests that the ability of phantasmagoria to be ambiguous about the source of the visual production—whether the technology itself or a trick of the observer's imagination—gave it significant metaphorical potential for constructing an epistemology that oscillated between "rational and irrational imperatives."⁹⁸ Phantasmagoric technologies occluded the means by which the visual technologies produced the phantasm. Following this line of inquiry and Willis's agentification of the microbe via microscopical phantasmagoria, *Dracula* helps us see how the fictionalization of the martial metaphor has been obfuscated; how we have imbued it with inimical agency and in so doing hidden the very process by which the material histories of military medicine informed this metaphoric transformation. This reshaping served to make thinkable the translation of social and cultural threats into biological ones.

Given the way the germ allowed for an even more disenchanted antagonization of disease, it is understandable that Sontag attributes the origin of the martial metaphor to the 1880s and the rise of germ theory.⁹⁹ However, as I have demonstrated, it has a much longer history. *Dracula* is a crucial text for understanding the relationship between contagionism, anticontagionism, and germ theory in metaphorizing war and the way both older disease models

⁹⁸ "Phantasmagoria: Spectral Technology and the Metaphorics of Modern Reverie," *Critical Inquiry* 15, no. 1 (1988): 30.

⁹⁹ *Illness as Metaphor*, 65–66.

fold into the inimical agent of the microbe. Through its dialectic, *Dracula* narrates their epistemological conflation and development while also signaling their biopolitical implications, the remnant of judicial power in the era of modern biopolitics; it narrates how the old ways of governing through force and punishment could be folded into the new productive models of power, namely how the quarantine and the spectacle of force remains a possibility but is also itself abstracted into the idea of producing the health of “us” rather than “them.”

Dracula is itself a self-conscious product of mass culture reflecting on technologies like the typewriter that allowed for the mass reproduction of narrative.¹⁰⁰ A world of vampires, Brantlinger suggests, would be overrun by copies of the undead,¹⁰¹ not unlike the hidden world of microbial life with its reproducible and agentive pathogenesis. In its mass circulation, *Dracula* replicates the martial metaphor, encoding the zeitgeist of insecurity: of mysophobia,¹⁰² racial anxieties of degeneration, reverse colonization, women’s sexual freedom, and the vitality of the British military. In this way, *Dracula* writes the medical future of Britain in a military capacity, drawing from both the present and the past.

¹⁰⁰ Brantlinger, *Taming Cannibals*, 200; Jennifer Wicke, “Vampiric Typewriting: *Dracula* and Its Media,” *ELH* 59, no. 2 (1992): 496.

¹⁰¹ Brantlinger, *Taming Cannibals*, 199.

¹⁰² Fear of germs.

Chapter 4: Conan Doyle's Imperial Armamentarium

In moving from the miasmatic specter to the minute germ, the front line of the medical establishment's fight against morbidity and mortality assumed a microscopic order in the final decades of the nineteenth century. While Kingsley led the charge against inimical miasma in Victorian literature and culture in the middle of the century, the soldiers of the martial metaphor—both medical and literary—faced a radical reconceptualization of the way this war would be fought and what the enemy actually was. Stoker introduced the vampire, human-sized but informed by microbial, in particular parasitic life, and re-enchanted the “enlightenment” of medicine and imperialism in the fictional frame of war. Stoker's invocation of the Gothic and monstrous relied on a highly visible and abject inimical disease. As it is a Gothic novel, *Dracula's* formal use of the martial metaphor relies on excess, on tableau and spectacle. Just as literature circulated the metaphor while occluding its material military origins, Arthur Conan Doyle's detective fiction and medical and historical prose both illuminate and obfuscate the martial metaphor.

Doyle circulates the metaphor through two paradigms: detection and immunity, both of which are informed by the medical sciences of bacteriology and toxicology. In *A Study in Scarlet* (1887), the narrator John Watson, a military surgeon just returned from the Second Anglo-Afghan War (1878–80), writes that he “gravitated to London, that great cesspool into which all the loungers and idlers of the Empire are irresistibly drained.”¹ In Doyle's fiction, imperial structures often figure as producers of infectious and polluting detritus. Watson and Holmes serve as the empire's “immune system,” according to Laura Otis,² because they recognize and disarm

¹ Arthur Conan Doyle, *Sherlock Holmes: The Complete Novels and Stories*, 2 vols., vol. I (2003), 4. Hereafter cited parenthetically in the text as *SS*.

² *Membranes*, 6.

pathogenic others. Indeed, Holmes upholds the biopolitical tenet that English society “must be defended.” In the Holmes stories, medicine is war, but this war is less explicit than the one in Crimea, nearly invisible in fact, at least until the early twentieth century. And unlike the police and the military, Holmes and Watson work in unofficial capacities. In maintaining the system by differentiating and eliminating the threats and symptoms of the modern imperial age, but not being official repressive organs of the state, they keep the disease-producing social order intact: they don’t disrupt its production of threats. In other words, they identify and fight infections but don’t treat the problem at their root, which is the exclusionary and differential way of producing Englishness. This is a vicious cycle much like the martial metaphor’s tendency to exacerbate the conditions and anxieties that require it. Holmes conducts a war of intelligence, with an armed Watson providing the capacity for martial enforcement when needed. Holmes defends society by seeing the invisible traces of social pathologies in everyday bourgeois life, in the same way bacteriologists find their subject matter anywhere and everywhere. In this era, medicine could identify threats and allay symptoms but rarely cure, even though it was promoted as a perpetual war, as we have seen. Detection in Doyle works similarly.

The logic of immunity in the individual body is also apparent in Doyle, appearing there just as it was gaining purchase as a physiological theory toward the end of the century.³ Filth, bacteria, and poison are conflated in this picture, inasmuch as they all represent toxic infiltrations of the self by the other, and immunity becomes a discourse for understanding how the body parses this distinction. It thus naturalizes the martial metaphor by grounding it in the body. In this chapter, I consider the contradictions between Doyle’s espousals of Englishness and empire

³ I mean *immunity* in its biological sense, in contrast to earlier forms of juridical immunity as described by Roberto Esposito and the inoculation in the *The Last Man*.

across his corpus and his portrayal in his fiction of England's complicity in its own physical and societal sickness.

When placed in context and conversation with each other, Doyle's fiction and medical writings reveal a fraught relationship between the physician-author and the martial metaphor. Whereas his medical-journalistic and historical writings espouse the martial metaphor as a way to understand the relationship between humans and disease, his fiction troubles the validity of the same metaphor and exposes its contradictions. Empire must be defended, even though doing so continually opens the door to new physical disease through the expansion of territory and military infrastructure—as we saw with cholera in Shelley's *The Last Man*—and to new and inherent modes of corruption of the English race.

The scholarship on Arthur Conan Doyle with respect to medicine and metaphor has made this connection rhetorically. Otis's characterization of Holmes and Watson as an “imperial immune system” makes sense to modern readers, although Doyle himself rarely used it to describe Watson and Holmes's work in defense of the empire. However, rather than serving as an argument against Doyle's use of the metaphor, this absence reveals exactly how Doyle did frame medicine and war before and after the turn of the century. The fact that the metaphor is not overtly visible but is presented through the discourse of detection, as it is informed by bacteriology and immunity, suggests that it becomes an invisible structure for social order. Later, after the failure of the Boer War, in large part due to bacterial epidemics, Doyle deploys the metaphor explicitly in the face of a declining race and inability to control foreign territories.

In a similar vein to the metaphor of immunity, both Joe Childers and Yumna Siddiqi⁴ identify the “polluted,” corrupting agents of empire that bring their degenerate, savage

⁴ Joseph Childers, “Foriegn Matter: Imperial Filth,” in *Filth: Dirt, Disgust, and Modern Life*, eds. William A. Cohen and Ryan Johnson (Minneapolis: University of Minnesota, 2006);

counterparts with them to penetrate England's borders as they disrupt the social order. Both lay out the ways Doyle's texts reveal the contradictions in imperial capitalism. The question for Doyle, according to Childers, is how to protect Englishness from external, corrupting filth while saving it from its own inherent corruption.⁵ Childers and Siddiqi reveal the ambivalent position Doyle's fiction takes with respect to empire: on one level, defending it, as Holmes polices the empire for criminal threats; on the other, indicting the colonial economy.

On a different but related tack, Susan Cannon Harris and Upamanyu Pablo Mukherjee consider how the discourse of *contagion*—related to but distinct from filth—threatened national identity. Harris argues that Doyle conflates the toxicological with infectious disease in order to express the threat of imperial impurity. She suggests that Holmes uses his expertise in detection to treat contagious-toxic threats, doing what medicine by itself could not.⁶ Following Siddiqi and Childers, Mukherjee suggests that Holmes's curative power over the degeneration and dilution of Englishness is unhinged when read in the context of tropical infection and malingering in "The Adventure of the Dying Detective" (1912).⁷ What all these works identify is the way these different pathogenic valences—contagious, toxic, polluted, degenerate—come to be embodied in colonial and internally corrupt others while remaining inherent in the system that wants to rid itself of them.

Siddiqi, "The Cesspool of Empire."

⁵ "Foreign Matter" 204–05.

⁶ "Pathological Possibilities: Contagion and Empire in Doyle's Sherlock Holmes Stories," *Victorian Literature and Culture* 31, no. 2 (2003): 448.

⁷ "'Out-of-the-Way Asiatic Disease': Contagion, Malingering, and Sherlock's England," in *Literature of an Independent England: Revisions of England, Englishness, and English Literature*, eds. Claire Westall and Michael Gardiner (New York: Palgrave), 80, 88.

The role of the pathogenic and the toxic speaks to how national identity works in Doyle's Holmes fiction. England defines itself militarily in terms of imperial expansion and conquest, and Englishness is strongest after exposure to contamination: "Only against foreignness can England show its true mettle," Childers suggests.⁸ Doyle presents the martial metaphor as a way of testing and strengthening Englishness, like vaccination does for immunity. Thus, Englishness operates much like masculinity and nation do for Kingsley, with war and disease making men, and their assemblage into a nation, stronger through a kind of purging. Having already established how male, middle-class subjects came to be an index of the health of the nation, as Gilbert suggests, we saw in Kingsley how Crimea and cholera prompted men to forge strong masculinity while supported by wife-nurses in the war against miasma. By the time we reach Doyle, the martial metaphor's role in this middle-class health index has become embedded in social order; however, we also begin to see how this failed to produce the hygienic resiliency Kingsley espoused.

By considering how the medical readings signal the contradictory logic of health and Englishness in the Holmes fiction, this chapter examines the ways the discourses of bacteriology, immunology, and toxicology are not only related through detection and medicine but are also conceptualized and linked by a military ethos across Doyle's writings; they converge within the framework of the martial metaphor. The logic of the immune system as bodily defense reflects that of the military as national defense by way of the martial metaphor, a structuring concept in Doyle's medical prose and fiction. Precisely how the martial metaphor operates in Doyle's work is a question of Englishness. According to Bichat's definition of life, the health of the individual is inherently pathologized: life is always engaged in the process of death, and consequently it is diseased in its mortal capacity. In this logic, life is defined by what it is not, namely death, and

⁸ Childers, "Foreign Matter," 205.

disease is the processes between them. If life is a war to forestall disease, a life is productive only insofar as it makes itself not-diseased. For Doyle, Englishness functions the same way. As Doyle defines Englishness, and national health in the face of imperial and internal threats, it is an interminable process of exposure, identification, and resistance—a process very much like the activity of the immune system. This lets us see how Holmes' immunological detection and Doyle's own investment in militarism and empire in his prose come to be naturalized, even incorporated, into the contemporaneous medical discourse in which the body, for the first time in medical history, defends itself.

This chapter takes a two-part structure because tracking the martial metaphor across Doyle's fiction and prose reveals that the shape it takes in his fiction is not static. The Holmes fiction from before the Boer War employs the martial metaphor as an invisible structural logic, influenced by Doyle's writings on bacteriology. After the war, embodied disease itself becomes much more present in his fiction, taking the form of actual antagonists, as does military medicine. This shows how the medical military failures of the Boer War prompted Doyle to reaffirm the martial metaphor as a visible national ethos to define and defend Englishness.

In segment I, I show that bacteria do not appear overtly in Holmes stories before 1899, and the martial metaphor is visible only in Watson's being a military physician. Given that Doyle trained as physician during the development of bacteriology, immunology, and toxicology, it is essential to determine how these developing specialties shaped his understanding of medicine in military terms. Thus, I offer an extended reading of Doyle's medical prose and the related scientific conversations in terms of the medical science and politics of the period. In detailing this context, I draw attention to the way the logic of immunity and microbial contamination in his prose frames Holmes and Watson's relationship to Englishness and empire. I begin by discussing the literary techniques in Doyle's writings on bacteriology: he deploys military and colonial terms

in his article “Life and Death in Blood,” for instance, encouraging readers to internalize the martial metaphor. I then consider how this framing is related to the contemporaneous theories of cellular immunity. I follow this with a reading of the significance of toxicology. Claude Bernard’s experimental medicine appears in Holmes stories such as *A Study in Scarlet*, *The Sign of Four* (1888), and “The Adventure of the Speckled Band” (1892); I show that while Doyle’s prose affirms the martial metaphor more overtly here, its invisible presence as a structuring logic in his fiction before the Boer War is rhetorically aligned with the logic of differentiating self and other, poison and cure, and the English and the foreign. I conclude by showing how Doyle’s article on Robert Koch’s failed cure for tuberculosis primed the idea of pharmacological medical weapons, or “torpedoes” in Huxley’s terms, as a way to supplant the body’s internal immunity with medical technology.

In segment II, I show how Doyle drew from military medicine during his personal experiences in the Boer War to assert the martial metaphor more explicitly in his fiction and nonfiction after 1899. I begin by discussing how Doyle himself personified the martial metaphor, in the same way the fictional Watson does in his backstory: by serving as a British military surgeon. I trace Doyle’s expressions of distress both at the military’s inability to support its troops medically and at the declining vitality of the British as a physically robust military force in *The Great Boer War* (1900), *The War in South Africa: Its Causes and Conduct* (1902), and other works on the war and its military and medical problems. I then discuss how Doyle’s defense of British policies and practices during the Boer War—where the British instituted the first concentration camps—shows how military practices at the end of the nineteenth century were metamorphosing into biopolitical governance. The colonial experiments became “labs of modernity” informing the use of medicine as a means of population control on the home front, a usage that is rhetorically deployed in the martial metaphor. I conclude segment II by discussing

the appearance of infectious disease in inimical constructions in Doyle's post-Boer War fiction: "The Adventure of the Dying Detective" and "The Adventure of Blanched Soldier" (1926). Doyle uses the martial metaphor in the shape of overt bacteriological threats in his later fiction to simultaneously spur and allay the anxieties of a weakening British race and empire, a contradiction that suggests that metropole and empire were intractably sick to begin with. Although Doyle, an avid supporter of British militarism and imperialism, uses the martial metaphor to support its imperatives, reading them in the context of their military history and their facile resolutions suggests that imperial structures and military actions were not only sick but exacerbating rather than dispelling disease.

Across Doyle's corpus, as I show in both parts of this chapter, the promotion of the martial and its power to destabilize the equation of Englishness with health ultimately reinscribe the martial metaphor. That is, they either reproduce the intellectual formation itself or they foster the conditions to require it as a narrative order. Ultimately, however, Doyle's paradoxical presentation does the cultural work of circulating it as a necessary and accessible language to understand both infectious disease and the medicalization of social difference.

I

Detecting and Defining Microbial and Imperial Threats

If bacteriology, and medical science more broadly, sought to make the invisible visible, then the martial metaphor worked in the opposite direction, to occlude the material, military history of the figurative war against germs by replacing the military with detection and the disciplinary social ordering it fosters.⁹ Detection was the key to the metaphorical militarization of medicine. This

⁹ Lawrence Rothfield, *Vital Signs: Medical Realism in Nineteenth-Century Fiction* (Princeton, NJ: Princeton University Press, 1992), 142.

connection is due to the then-evolving public interest in bacteriology but also to the gain in cultural purchase of the closely-related discourse of medical visibility. Both of these were linked with the anxieties of empire and its defense. Literature like Doyle's Holmes fiction, in tandem with essays in popular periodicals and the medical press, spurred the public's adoption of these intersections. As Jennifer Tucker suggests, "Journalistic images of the war against germs produced for mass audiences during the 1890s bear witness to the intensifying scientific and popular interest in bacteria and to the readiness of many scientists to exploit military and imperialist iconography and racial stereotypes to show germs as unruly tribes of deadly microorganisms."¹⁰ To understand how this military, imperialist, and racial iconography works in Doyle, we must look at how his journalistic writings on medicine informed the martial metaphor qua detection.

Bichat's medical gaze enabled pathological anatomists to observe lesions in tissue, and by the 1860s the medical gaze was increasingly a microscopic one. In this new era, cells rather than tissues were the objects of medical knowledge. Moreover, in contrast to pathological anatomy, which investigated disease post-mortem, research could focus on living cells in tissues and fluids, and the gaze could investigate disease processes as they occurred rather than just through their ultimate effects.¹¹ Bichat's assemblage of functions that resist death came to be known at the cellular and chemical levels.

Doyle, training as a medical student from 1876 to 1881, was at the center of this epistemological shift. Joseph Bell, a medical school professor of Doyle's, served as the model for

¹⁰ "Photography as Witness, Detective, and Impostor: Visual Representation in Victorian Science," in *Victorian Science in Context*, ed. Bernard Lightman (Chicago: University of Chicago Press, 1997), 394.

¹¹ Michael Worboys, *Spreading Germs*, 31.

Sherlock Holmes with his uncanny observation and deduction skills, and he himself suggested in an 1893 introduction to *A Study in Scarlet* that “Dr. Conan Doyle’s education as a student of medicine taught him how to observe. . . . Eyes and ears which can see and hear, memory to record at once and to recall at pleasure the impressions of the senses, and an imagination capable of weaving a theory or piecing together a broken chain, or unravelling a tangled clue, such are implements of his trade to a successful diagnostician.”¹² Linking this kind of observation to bacteriology, he continues, “the greatest stride that has been made of late years in preventive and diagnostic medicine consists in the recognition and differentiation by bacteriological research of those minute organisms which disseminate cholera and fever, tubercle and anthrax. The importance of the infinitely little is incalculable”¹³—sounding, in the last phrase, like Holmes himself.

As a consequence of the new granular focus of medical research and disease etiology, immunity and bacteriological discourse became the two systems of thought that subtended the martial metaphor. Together, they linked the internal, “natural” defenses of the body with medical technologies for the same end. Both of these concepts were fundamentally entangled with nationalist and military technologies and imperatives. The martial metaphor, however, worked to occlude this connection and make medical and biological immune defenses equally “natural.” With the emergence and acceptance of new medical technologies came a new kind of medical gaze, one that viewed disease and its physiological counterparts in the body, the components of the immune system, and demonstrated the material actuality of the martial metaphor at the microbial and microscopic scale.

¹² Joseph Bell, “Mr. Sherlock Holmes,” in *A Study in Scarlet*, ed. Arthur Conan Doyle (London: Ward, Lock, and Bowden, 1893), 9.

¹³ *Ibid.*, 10.

The emergence of bacteriology in the 1880s led medical scientists to start thinking in immunological terms,¹⁴ investigating the mechanisms by which bodies themselves fought off disease, and by the 1890s a number of publications in the *British Medical Journal* cited Elie Metchnikoff's theory of cellular immunity, and did so through the martial metaphor.¹⁵ Before Metchnikoff's theory arrived, what made one immune was the lack of some component or quality that predisposed one to disease, as we saw with the geohumoral theory in the first chapter. Doctors and scientists began to move beyond general characterizations of immunity that framed certain inherent constitutions as more vulnerable to disease than others. As microscopy and bacteriology matured and scientists began observing pathogens in the body fluids and tissue in vivo, scientists like Metchnikoff and Koch began to consider how the body actively engaged foreign microbes.

Apart from representations of the body as a site of battles against disease, the concept of immunity has a long biopolitical history. Originating in a legal etymology from *munus*, meaning both gift and obligation, the term is linked to the political and legal status of the municipal. *Immunity* originally singled out individuals as not subject to municipal obligations while still included within the legal system that made that determination: it created exceptions to the law by

¹⁴ Warwick Anderson and Ian R. Mackay, *Intolerant Bodies: A Short History of Autoimmunity* (Baltimore: The Johns Hopkins University Press, 2014), 28.

¹⁵ See for instance, G. Murray Humphry et al., "A Discussion on Phagocytosis and Immunity," *The British Medical Journal* 1, no. 1625 (1892); Joseph Lister, "An Address on the Present Position of Antiseptic Surgery," *ibid.* 2, no. 1546 (1890); T. Spencer Wells, "The Bradshaw Lecture on Modern Abdominal Surgery," *ibid.* no. 1564: 1415. Spencer, for instance, writes, "The phagocyte theory of Metchnikoff, or rather his observations upon the wandering cells or leucocytes by which the animal body protects itself against the attacks of bacteria—taking in the bacilli, digesting them, and so preventing their multiplication and diffusion—explains much that was almost incomprehensible in the relations of bacteria to wounds and to infective diseases." *Ibid.*

demonstrating that the law exists without exception.¹⁶ It is not coincidental, then, that the same concept should play a significant role in the history of medicine as war. For the martial metaphor performs a correlative imaginary work with respect to disease: it creates a “disorder” in the form of war—a pathological state of human relations—in order to invite an ideological order on death and disease. In other words, the only way to understand disease in an age that was moving away from theological accounts was through an imposed discourse of disorder, namely war, that required an antithetical yet equally bellicose response. Although Ed Cohen has traced the idea of immunity as self-defense through the political philosophy of the Enlightenment and the biopolitical practices of the nineteenth century, the way this political focus linked public health with military practices has not been fully explored. Moreover, it was not until the 1880s that immunity materialized in the body and came to be linked with military medicine and public health by way of the martial metaphor. Doyle’s writings help us see how war, bacteriology, and immunology converged in this period.

Doyle was aware of Koch’s work from its inception, and he deployed the martial metaphor to explain the implications of bacteriology to a lay audience. He studied medicine during the period of development of the theories that informed Koch’s and Metchnikoff’s work. In March of 1883, a year after Koch’s discovery of the tuberculosis bacterium, Doyle published “Life and Death in Blood” in the popular periodical *Good Words*. The essay’s title invokes medicine as war, polarizing life and death as the surrogates for health and disease, humans contra microbes. Although Doyle doesn’t discuss Metchnikoff’s immunity explicitly, he does prefigure it in his discussion of leukocytes as the agents of life.¹⁷ And the titular and ordering logic of

¹⁶ Cohen, *A Body Worth Defending*, 5. See also Esposito, *Immunitas*, 43.

¹⁷ Although I hesitate to make such an affirmative claim, Alvin Rodin and Jack Key suggest that his description of the leukocytes does indicate his knowledge of Metchnikoff, whose first presentation on phagocytosis was published the same year as “Life and Death in Blood,” and

Doyle's essay were invoked in an image accompanying a 1912 article in *Harmsworth's Popular Science*.¹⁸ This visual representation bespeaks the discursive direction of Doyle's 1883 essay and bears a striking resemblance to his narrative. Moreover, it reflects Doyle's connection with the martial metaphor in terms of typhoid, which played a seminal role in his conceptualization of disease in his writings after the Boer War, as I show in segment II.

Doyle interpolates readers into the martial metaphor with inviting language that unites individuals with their physicians against microbial invaders. He achieves this enlistment through the discourse of microscopy. Working in the spirit of a scientific romance and prefiguring his science-fiction work,¹⁹ Doyle invites the reader to shrink down to the size of blood cells to watch the inner battle on the microscopic order: "Had a man the power of reducing himself to the size of less than the one-thousandth part of an inch, and should he, while of this microscopic stature, convey himself through the coats of a living artery, how strange the sight that would meet his eye."²⁰ Showing his shrunken reader the healthy life of the blood, Doyle identifies red blood cells, which carry oxygen, and the living creatures in the blood, the leukocytes, which "[hurry] away into the blood stream as . . . independent organisms" (*LD*, 178).

the engulfing capacity of leukocytes had been observed and published on as early as 1876. Alvin E. Rodin and Jack D. Key, *Medical Casebook of Doctor Arthur Conan Doyle: From Practitioner to Sherlock Holmes and Beyond* (Malabar, FL: R. E. Krieger, 1984), 99.

¹⁸ G. F. Morrell was a British artist and scientist who not only drew scientific illustrations but also political and military ones for the periodical press. See "The Fighting Line in Flanders, 1915." Many of these appear in the weekly newspaper *The Graphic*, which gave updates on the First World War.

¹⁹ Martin Booth, *The Doctor and the Detective: A Biography of Sir Arthur Conan Doyle* (New York: St. Martin's Minotaur, 2000), 101.

²⁰ "Life and Death in the Blood," *Good Words* 24, (March 1883): 178. Hereafter cited parenthetically in the text as *LD*.

Though Doyle remarks that leukocytes increase in number in diseased states, he would not have known exactly how these “bodies” work against disease. What is important, however, is that the leukocyte is “the creature possessing the attributes commonly associated with life, which is found in healthy human blood” (*LD*, 179). These are the very cells Metchnikoff characterized in more aggressive language only two years later, suggesting that “when one accepts the concept that phagocytes fight directly against pathogens, it becomes understandable that inflammation is a Defensive mechanism against bacterial invasion.”²¹ Doyle goes on to describe the forces that oppose the leukocytes: “In diseased conditions numerous others appear, differing from each other as widely as the flounder does from the eel, and presenting an even greater contrast in the effects which they produce” (*LD*, 179). And in forecasting the remainder of his essay, he proposes “to glance at some of the work done of late in this direction—work which has opened up a romance world of living creatures so minute as to be hardly detected by our highest lenses, yet many of them endowed with such fearful properties that the savage tiger or venomous cobra have not inflicted one fiftieth part of the damage upon the human race” (*LD*, 179). The construction of the microbial world suggests a journey—in genre, the narrative is a romance—that is both military and imperial, as the creatures described are linked to savage colonial animals like the tiger and the cobra. The latter, indeed, is reimagined in the Holmes fiction as an imperial biocontaminant, a way for those subjugated by empire to retaliate with natural and developed biomedical weapons, as I explain in the next section.

These lower-order creatures are pitted against the human “race,” a significant concept in Doyle’s work as applied to the English race, as a number of scholars have suggested.²² In the

²¹ Quoted in Cohen, *A Body Worth Defending*, 260. Metchnikoff speaks of the leukocytes as phagocytes as they engage in phagocytosis—literally “cell eating.”

²² Childers, “Foreign Matter”; Otis, *Membranes*; Christopher Pittard, *Purity and Contamination in Late Victorian Detective Fiction* (Burlington, VT: Ashgate, 2011); Stephen

same way, colonized races are often opposed to the English, who are frequently characterized as degenerating. Koch uses the language of racism and colonization when he writes of bacteria in terms of “cultures” and “colonies.”²³ Doyle characterizes the contest between humans and microbes in the same way, informed by the Darwinian struggle for existence, a struggle in which bacteria invade and die but leave their progeny in the human blood: “The horrible process goes on until either the race dies away, or their victim is exhausted” (*LD*, 179). While we don’t get any description in this scene of leukocytes “battling” bacteria, the contest is clear, in that it is one life or another; either the bacterial “race” is not strong enough to live in the human blood, for reasons that were at that point not fully understood, or the victim succumbs to the infection. In this way, Doyle’s essay primes the logic of immune-defense in British readers. This idea was as anxiogenic as it was exiting, reflected in the suspense of the prose.

Where Kingsley and other sanitarians viewed the invading enemy as a visible filth or an olfactorily perceptible miasma, the advent of modern germ theory created a paradigm in which inimical bodies were everywhere and anywhere. Doyle’s “strange sight” is a rhetorical device that frames the interaction between the healthy body’s agents and microbes as an inimical one by simultaneously speaking of the smallness, even invisibility, of the microbes and rhetorically figuring them as life-sized enemies fighting in the human order of the world. When Doyle invokes the discourse of microscopy to explain life and death in the blood, he speaks to one of the foundational shifts in the way medicine was understood through the conceptual domain of war. Although bacteriology gave the doctors, readers, and general public of the nineteenth century a

Arata, *Fictions of Loss in the Victorian Fin de Siècle* (Cambridge: Cambridge UP, 1996).

²³ Deborah Brunton, *Medicine Transformed: Health, Disease and Society in Europe, 1800–1930* (Manchester: Manchester University Press in association with the Open University, 2004), 243.

new way to look at the world, it was not an entirely reassuring one.²⁴ On the one hand, inimical pathogenic agents could be seen through specialized equipment by medical specialists who now knew what to look for. This shift was also significant for understanding the discourse of expertise that appeared in the Holmes stories, as Rothfield suggests.²⁵ On the other hand, these foreign bodies were imperceptible to the naked eye or the sensitive nose, and could at any moment penetrate the boundaries of the porous subject. The way to allay preoccupation with this was to give these agents visibility. Only what can't be defined is truly threatening; as Holmes puts it, a threat would "cease to be dangerous if we could define it."²⁶

Drawing on the visuality of the microscope, Doyle invites readers to watch the battle between life in the body and the death in the invading bacteria. The effect is to scale the abstract battle between life and death down to the microscopic level and put the relationship between the microbial agent and the human—and the perception of their encounter—on level footing:

Let us go to the bedside of some poor fellow suffering from this complaint, and having once more assumed our microscopic proportions, let us inspect personally the condition of his circulation. We see again the transparent serum, the busy yellow discs, the languid omnivorous pieces of jelly; but what is this? Writhing their way among the legitimate corpuscles there are countless creatures, thin and long, with snake-like body and spiral motion. (*LD*, 178)

Doyle's invitation to shrink down and observe the leukocytes shifts back to a more expository mode when he gives his forecasts for the "latest work" he discusses in his essay. However, the cohortative mood—"let us"—still encourages the reader to take part in the romance. This is the very technique he uses in his essay on Koch's cure to describe his laboratory in Vienna, as we

²⁴ Willis, *Vision, Science, and Literature*, 36–8.

²⁵ *Vital Signs*, 142.

²⁶ "The Adventure of the Copper Beeches" in Doyle, *Sherlock Holmes: The Complete Novels and Stories*, I, 500.

will see. By shifting back and forth between the external, human order and the microscopic, Doyle puts his readers in the position of the doctor examining a patient's signs before embodying them in the microscopic medical gaze, letting the readers internalize this visual narrative by imagining it in their own bodies.

This invitation to imagine, however, operates beyond the realm of the rhetorical. As Martin Willis observes, the observation through the microscope occurs in a space between the real and the imagined. The job of the imagination, when joined with the microscope, is to construct an image of what lies *beyond* the eye and the lens's limits. This is a clear departure from "objective" viewing.²⁷ Willis suggests that this linkage between the imaginative and the empirical in the use of the microscope became a central element of the fictional examination of the influence of infectious disease on Victorian society.²⁸ While he links this effect to the Gothic mode, and to *Dracula* in particular, I suggest that it is also operative in Doyle's "Life and Death" and his Holmes's fiction—the microscope becomes a way to understand how detective fiction is linked to the martial metaphor. In each case, what is needed is a technology for identifying the pathogenic, be it the trace of a criminal or a bacterium. In Doyle's detective fiction, the foreign threat is small and invisible to the non-expert, like the bacteria in blood. Holmes's work is analogous to that of the bacteriologist in that both trace the links between people: Holmes follows the criminal through his malevolent activities while the bacteriologist follows the microbe from carrier to victim.²⁹

²⁷ Willis, *Vision, Science, and Literature*, 19.

²⁸ *Ibid.*, 18.

²⁹ Otis, *Membranes*, 105.

Even while inspiring anxiety in terms of microbial smallness, “Life and Death” works to be uplifting, supporting its reader’s faith in the progress of biomedical science toward victory in a battle the human race has long been losing:

Given that a single disease, proved to depend upon a parasitic organism, can be effectually and certainly stamped out, why should not all diseases depending upon similar causes be also done away with? That is the great question which the scientific world is striving to solve; and in the face of it how paltry do war and statecraft appear, and everything which fascinates the attention of the multitude! (*LD*, 181)

Recalling Kingsley’s use of the device—the suggestion that war and its causalities are insignificant in comparison with the ravages of disease—Doyle reinscribes the martial metaphor by creating a disjunction between war and disease. When he suggests that nation-on-nation war is of “paltry” interest beside bacteriology, he rhetorically figures medicine as *the* war. If human wars are so inconsequential, the war of medicine is the ur-war. This is not just a philosophical abstraction; it is demonstrated time and again throughout history in the power of disease to curtail military force.

With his ur-war construction, Doyle also offers another comparison to statecraft. By suggesting that medicine-as-war is the primary concern of the state, guided by the development of science, he obscures the amount of actual military and political history involved in making medicine into this metaphor, eliding the material connections between medicine and war. In Doyle’s pre-Boer War fiction, this leads to the hidden disciplinary structures that the martial metaphor bolsters; in these works, rather than bacterial or parasitological infections, “disease” takes the form of poisons, corrupted Englishman, and foreign others, and “medicine” becomes detection and forensic science.

Toxicology and “Experiments of Destruction”

Toxicology is a recurring element in Doyle’s writing that links detection, medicine, and the martial metaphor. His conflation of contagious microbes and toxins shapes both his own and Holmes’s relationship to empire. The discourse of toxicology, furthermore, as it relates to the experimental medicine of Claude Bernard and his “experiments of destruction,” informs how war structures the forensic sciences in Holmes’s detection. Doyle himself had more than passing knowledge of poisons; training at Edinburg in 1876, he would have studied under Sir Robert Christianson, one of the founders of modern toxicology.³⁰

Conceptually speaking, the essence of medico-military war is the imperative to keep out that which is toxic to the individual or national body. We see this in the operant logic of “Life and Death,” in which leukocytes are characterized as “legitimate” in contrast with the spiral, “snake-like” bacteria—a description that imbues the microbial with a malevolent and colonial quality by recalling the earlier mention of the “venomous cobra.” This language also resembles Doyle’s recurrent use of the poison trope in the Holmes stories, where it works as a pathogenic agent through not only toxicity but contagion: the Holmes stories exemplify a rhetorical trend of conflating organic toxins, drugs, and infectious agents as “foreign-born biocontaminants”—the chemical and biological weapons, as Harris suggests,³¹ with which the people subjugated by the empire fight back.³²

³⁰ Harris, “Pathological Possibilities,” 449.

³¹ *Ibid.*

³² Doyle wasn’t isolated in this respect, there are a number of examples of figuring poison qua contagion. Moreover, contagionists early in the century believed that some form of poison or toxin was the proximate agent of disease that travelled from person to person. See *ibid.*, 453; Margaret Pelling, *Cholera, Fever and English Medicine, 1825–1865* (Oxford [England]; New York: Oxford University Press, 1978); Pelling, “The Meaning of Contagion.”

Contagions figure in Doyle's use of poison in that he writes poisoners who either originate in or have recently returned from colonial, tropical areas. In "The Adventure of the Speckled Band," for instance, Dr. Grimesby Roylott, the impoverished last member of a noble family, travels to India, gains a medical license, and returns looking ill, behaving cantankerously, and bearing a poisonous swamp adder with which to kill his stepdaughters for their estate. The antagonist of *The Sign of the Four* is Jonathan Small, who served as a soldier in India after spending time in jail for murder. He returns to England seeking stolen treasures, and brings with him a native of the Andaman Islands, Tonga, who is armed with poisonous darts. Poisoning is figured as a contagious vice spreading from the colonies and infecting corruptible Englishman, metonymically linked to their corrupt Englishness and also physically brought back to England by them. Doyle also associates toxins qua poisons with bacterial infections in his medical writings. In "Life and Death," he solidifies this connection when he describes Koch's ability "to cultivate the infection [*Bacillus anthracis*], as he might grow monkshood or any vegetable poison in the soil of his back garden" (*LD*, 181).³³ Holmes and Watson, too, frequently encounter foreign figures who have been "cultivated" by exotic colonized cultures to deploy poisonous biocontaminants, and to this extent their work is to identify and neutralize the effects of such agents, like Roylott and Small.

³³ Monkshood is a common name for *Aconitum*, also known as "wolfsbane," a flower. The active toxin, aconitine, has a history in nineteenth-century military medicine and imperialism. During the Indian Mutiny of 1857, Indian chefs tried to poison a British detachment by adulterating a soup with it. This account is given in Reginald Garton Wilberforce, *An Unrecorded Chapter of the Indian Mutiny: Being the Personal Reminiscences, Compiled from a Diary and Letters Written on the Spot* (London: John Murray, Albamarle Street, 1895), 89. The story goes that when the chefs refused to taste their own preparation, the British troops gave it to a monkey, who subsequently died—a trial reminiscent of Holmes' using a terrier to test a mysterious pill, which turns out to be poison, in *A Study in Scarlet*. In the twentieth century, the Soviets investigated its use as a chemical weapon. For a discussion of the poison in the Indian Mutiny, see Salahuddin Malik, "The Panjab and the Indian 'Mutiny': A Reassessment," *Islamic Studies* (1976): 95.

Doyle's use of the poison trope is linked to the militarization of medicine not just in its conflation of foreign contagion and contamination but also by way of Claude Bernard's experimental methods and their relation to pathology. Bernard, one of the most significant figures in nineteenth-century medical history, was best known for developing experimental medicine in *An Introduction to the Study of Experimental Medicine* (1865). A vivisectionist, he explored pathologies in live animals, often introducing them himself to see their effects, be it an anatomical aberration or a foreign substance. The discourse of toxins in Doyle and Bernard further links the two figures, by way of the martial metaphor, in terms of experimentation. As a physician training in the 1860s and '70s, it would have been difficult for Doyle to be unaware of Bernard's work; even though he does not mention him in Holmes, he refers to him in "The Parasite: A Story."³⁴

Holmes' detection skills are due not only to his keen powers of observation but, like Bernard's, to his vast experience with experimental science. This is abundantly evident in Holmes's first appearance in *A Study in Scarlet*, when Watson enters Holmes's lab: "This was a lofty chamber, lined and littered with countless bottles. Broad, low tables were scattered about, which bristled with retorts, test-tubes, and little Bunsen lamps, with their blue flickering flames. There was only one student in the room, who was bending over a distant table absorbed in his work."³⁵ Holmes informs Watson that he is working on a hemoglobin reagent to detect occult blood for forensic purposes; indeed, he is studying "the scarlet thread of murder" (SS, 37). He also admits that he "dabble[s] in poisons" (SS, 9). In this introduction, we learn that Holmes

³⁴ "What a fellow Wilson is! If I could only throw the same enthusiasm into physiology that he does into psychology, I should become a Claude Bernard at the least." Arthur Conan Doyle, *The Parasite: A Story* (New York: Harper and Brothers, 1894), 3.

³⁵ *A Study in Scarlet*, in Doyle, *Sherlock Holmes: The Complete Novels and Stories*, I, 7. Hereafter cited in the text as SS.

performs work not unlike Bichat's pathological anatomy, when he tries to time the process of post-mortem bruising: "When it comes to beating subjects in the dissecting rooms, it is certainly taking a bizarre shape" (SS, 6). Finally, Holmes does his own "experiment of destruction" when he tests the mysterious pill found at the crime scene on a live terrier (SS, 58).

Holmes's work is aligned with Bernard's through their common training and technologies. Holmes and Koch, in their observation and detection skills, exemplify Bernard's ideal experimental scientist, who "forces nature to reveal herself by attacking her with all manner of questions."³⁶

For Bernard, the experimental method is the central weapon in the fight against disease. In making his case for experimental medicine, Bernard writes, "the experimental physician . . . possess[es] weapons with which he must act . . . [and] in wishing to determine with the aid of modification (poisons) the laws of the phenomena of life, we attack the problem of therapeutics directly."³⁷ As Ed Cohen notes, Bernard challenges Hippocratic medicine for its passivity by reconfiguring medicine, in the name of health, as war.³⁸ If war is politics by other means, then for Bernard, war on the animal body is medicine by other means. One method that emerges from this bellicose reconfiguration is the direct provocation of disease and death in experiments. It is thus no surprise that he characterizes many of his techniques as "experiments of destruction,"³⁹ in which the investigator impedes or "destroys" a physiological function in order to reverse engineer

³⁶ Cohen, *A Body Worth Defending*, 202.

³⁷ Quoted in *ibid.*

³⁸ *Ibid.*, 193. See also Georges Canguilhem, *The Normal and the Pathological* (New York: Zone Books, 1989).

³⁹ See Lisa Cartwright, *Screening the Body: Tracing Medicine's Visual Culture* (Minneapolis: University of Minnesota Press, 1995), 26.

a pathological process. In terms of the broader connections between war and medicine, the pursuit of destructive activities as a means to the ultimate goal of healing follows the same logic as killing to make live.

One of Bernard's best-known experiments of destruction was the use of poison, making him further relevant to the toxicological trope in Doyle's writing. According to Cohen, Bernard may have been the first to deploy poison medically as a part of medicine's developing armamentaria, using toxic substances to develop therapeutic ones.⁴⁰ For example, Bernard experimented with curare⁴¹—an umbrella term for a number of South American plant-based alkaloid toxins—to immobilize animals while he experimented on them. He famously demonstrated that curare causes paralysis by affecting the motor nerves while leaving the sensory nerves unaffected. Curare appears explicitly in Doyle's "The Vampire of Sussex" (1924), and though it is not named, the poison in *A Study in Scarlet* is often read as curare.⁴²

This is only one of the many exotic toxins in the Holmes stories; others are Tonga's blow dart, which is "certainly not" an "English thorn" but a dart tainted with a powerful "vegetable alkaloid";⁴³ and the poisonous snake in "The Adventure of the Speckled Band" (1892), which kills Roylott, the maddened physician who used it as a murder weapon previously. In both of these stories, Englishmen are infected by empire and bring the contaminants back to their

⁴⁰ *A Body Worth Defending*, 202.

⁴¹ According to Eliot Valensten, Bernard began experimenting with the toxin in 1840 after a friend gave him the substance, claiming he had acquired it from an African native. See Elliot S. Valensten, *The War of the Soups and the Sparks: The Discovery of Neurotransmitters and the Dispute over How Nerves Communicate* (New York; Chichester: Columbia University Press, 2007).

⁴² See also "The Adventure of the Devil's Foot."

⁴³ *The Sign of the Four* in Doyle, *Sherlock Holmes: The Complete Novels and Stories*, I, 162. Hereafter cited parenthetically in the text as *SOF*

homeland. In the latter, Holmes claims that the use of an exotic toxin would occur to “a clever and ruthless man who had had an Eastern training.”⁴⁴ In other words, one contaminated by empire. “The Speckled Band” is particularly anxiogenic, in that it is a doctor who brings the snake back as a murder weapon. This inverts the martial metaphor by having an English medical man deploy biomedical knowledge for personal gain rather than the promotion of health. Holmes doesn’t outright pathologize and cure what is plaguing the empire, the system that is producing the imperial detritus; he merely tries to regulate its toxic, contagious waste. This indeterminacy, the way Holmes both upholds empire and displays its inherent pathogenicity, speaks to the way poison works in a dialectical fashion with respect to health and disease.

“Poison” can be used as a weapon for or against health. In toxicology, it is often difficult to define poison qualitatively; consequently, it is a tenet of toxicology that it is the dose that makes the poison.⁴⁵ Doyle understood this, as is evident in his published response to the anti-vaccinationist Colonel Wintle:

Anti-vaccinationists harp upon vaccine being a poison. Of course it is a poison. So is opium, digitalis, and arsenic, though they are three of the most valuable drugs in the pharmacopoeia. The whole science of medicine is by the use of a mild poison to counteract a deadly one. The virus of rabies is a poison, but Pasteur has managed to turn it to account in the treatment of hydrophobia.”⁴⁶

Doyle acknowledges that medicine operates through the dialectic of the *pharmakon*, in which the indeterminate etymology of *pharma* reflects the fact that a drug can be at once poison and

⁴⁴ “The Adventure of the Speckled Band” in *ibid.*, 422.

⁴⁵ For a discussion of this as it relates to orthodox medicine and quackery in literature, see Sylvia A. Pamboukian, *Doctoring the Novel: Medicine and Quackery from Shelley to Doyle* (Athens: Ohio University Press, 2012).

⁴⁶ Arthur Conan Doyle, “Compulsory Vaccination,” *The Hampshire County Times*, July 27, 1887, https://www.arthur-conan-doyle.com/index.php?title=Compulsory_Vaccination_-_The_Hampshire_County_Times.

remedy. This paradox maps onto the biopolitics of the martial metaphor: medicine that heals but that also draws on metaphors of killing and violence; medicine that both makes live and lets die. I discuss an example in the way medical knowledge, in a broader biopolitical sense, was used to lay siege to the colonial population during the Boer War, in the second part of this chapter. The intermediate quality of drugs, in the broad sense of the term, recalls Childers's suggestion, in that the tension between remedy and poison reveals how concepts of foreign filth, others, and contagions from the empire worked to reaffirm Englishness, which defined itself by resisting the incursions of the foreign and the other even while requiring the other to define itself.

In this way, the trials of corrupt Englishman and savage foreign invaders worked as a kind of "vaccine" much like Holmes's drug use, strengthening Englishness by exposing it to what it was not. Doyle's embodied metaphor of military medicine, John Watson, works the same way: he is "damaged goods," poor and disabled from his time on the outskirts out empire—he was injured by a bullet wound—yet he works with Holmes to give a narrative shape to his crime detection. Moreover, he acts as a touchstone of Englishness, keeping Holmes in check with the proprieties of middle-class English life⁴⁷—as Holmes is good at his job precisely because he can identify with what falls outside normal Englishness, through his contacts in the lower class and his ability to disguise himself as one of them. Holmes is immune, exempt both from the law and from social inclusion by his identification with the poor, the degenerate, and other undesirables overlooked by the proper British subject. These disguises would endanger Holmes's very identity without Watson serving as a touchstone.⁴⁸

⁴⁷ "Foreign Matter," 217.

⁴⁸ *Ibid.*, 216.

Watson even polices Holmes's health, most notably in chastising him for using cocaine in *The Sign of the Four*: "Remember I speak not only as one comrade to another, but as a medical man to one for whose constitution he is to some extent answerable" (*SOF*, 124). Cocaine works as a kind pharmakon, stimulating and sharpening Holmes' skills while also causing tissue damage, but this is not all. The drug also signals the pathological qualities inherent in both Watson and Holmes. Watson cannot take the drug because "[his] constitution has not got over the Afghan campaign yet. He cannot afford to throw any extra strain upon it" (*SOF*, 123); that is, his body is corrupted, a product of the cesspool of empire. But he also suggests that habitual cocaine use is a "pathological and morbid process which involves increased tissue change and may induce permanent weakness" (*SOF*, 124). Thus, even Holmes and Watson fall into this ambivalent position between poison and cure. Holmes's drug use works, as Childers suggests, like a "vaccination, allowing him to push the limits of Englishness, to move about the London cesspool with relative immunity, to explore ambiguity in his own identity, and still be able to return, and to help define what Englishness is and how it should function."⁴⁹ The drug functions as ergogenic aid, helping him work at full capacity by artificially stimulating his mind as if it were performing its usual work of observation and detection. As I have argued regarding Otis's use of immunity, we can connect Childers' claim with Doyle's own understanding of vaccination and its relevance to the medicine-as-war metaphor.

The strengthening-by-exposure quality of actual, rather than metaphorical, vaccinations is evident in the fact that they are, per Doyle's definition, "poisons"—the introduction of foreign, potentially toxic matter into the body. Furthermore, vaccination practices do incur "losses," as some people develop the sickness from the prophylaxis.⁵⁰ Doyle called vaccination "one of the

⁴⁹ *Ibid.*, 218.

⁵⁰ George Bernard Shaw is a famous case. He campaigned against vaccines throughout

greatest victories ever won by science over disease,” invoking the martial metaphor again and characterizing anti-vaccinationists as degenerates: their notion of progress was to “revert to the condition of things as they existed in the dark ages before the dawn of medical science.”⁵¹ I address the significance of vaccines to the military and Doyle’s investment in them in the final section of this chapter. Here I return to Bernard and the way his work with poisons and his experiments of destruction led to a specific epistemology of pathology that belies the militarization of medicine.

Through its connections to contagion, foreign contaminants, vaccination, and Bernard, “poison,” as a discourse and a technological actor, plays a significant role in the history of the martial metaphor. This is because not only are poisons tied to the development of more effective pharmacological weapons, as I show in the next chapter, and a useful metaphor for thinking about the national and the foreign, but they are linked with the foreign contaminations that threaten the national body in the same discursive formations as infectious diseases from abroad.

Bernard and Doyle are “blood-related” beyond their toxicological connections, too. For both, blood serves as an organizing principle for health and disease. In Doyle’s essay on microbes and leukocytes, it is the medium of life and death, and in his fiction, it is a trace of crime and contamination that the detective puts under a medico-forensic gaze. In the medical essay, he describes how Koch theorized that bacteria live in blood and proved it by transferring blood from an infected animal to a healthy one, which then became ill. For Doyle, blood is the life-giving medium, carrying oxygen—recalling Kingsley’s identification of oxygen with life that resists death—and leukocytes, the only creature “in healthy human blood” with vital qualities. This

his adult life after he was made severely ill as a child by a vaccine.

⁵¹ Doyle, “Compulsory Vaccination.”

medium is infiltrated by foreign agents, and biologic battles with infection are thus fought in the blood, which is similar to Stoker's use of blood as a biopolitical medium.

A Study in Scarlet eponymously characterizes the work of detection in terms of blood: "There's the scarlet thread of murder running through the colorless skein of life," Holmes instructs Watson, "and our duty is to unravel it, and isolate it, and expose every inch of it" (SS, 37). Blood becomes not that which sustains life but that which gives evidence of its being attacked or exterminated. Nonetheless, the medico-scientific technique to be applied is characterized in the discourse of microscopy. This is blood-work, metaphorically and literally, and it has overlapping applications in medicine and forensics,⁵² as much of the work of detection is finding blood and learning where it came from and how it was spilled. The "scarlet thread" is that in the fabric of life which is tainted, the stain that needs to be isolated and examined—a guiding principle that maps onto techniques developed during the advent of germ theory, especially by Robert Koch. In order to be made visible, bacteria needed to be chemically stained; to see tuberculosis, Koch used the methylene-blue staining technique developed by Paul Ehrlich.⁵³ While we can indeed read Holmes as identifying systemic structures that create corruption—insofar as his stories leave those structures open to critique by the reader—Holmes and Watson find the individual pathogens, but he ignores the culture or medium that allows them to thrive. Holmes and Watson alleviate symptoms.

Bernard theorized that the *milieu intérieur* held the blood, as a sealed-off interior environment of the individual body. This biopolitically affirmed the individual as the locus of the

⁵² Basil Kawash, "From the Stethoscope to the Magnifying Glass: Sherlock Holmes and Medicine in Late 19th Century Britain," *Historia Medicinæ* 4, no. 1 (2015).

⁵³ Steve M. Blevins and Michael S. Bronze, "Robert Koch and the 'Golden Age' of Bacteriology," *International Journal of Infectious Diseases* 14, no. 9 (2010): e747.

medical battle against death. He writes, “The stability of the internal environment [*milieu intérieur*] is the condition for the free and independent life.”⁵⁴ While this has often been taken as a theorization of homeostasis, and even seems to point back toward humoral theory, the role of the blood in cordoning off the self and providing an internal protective environment for the vital tissues prefigures the role of immunity as natural self-defense. Bernard takes the earlier sanitary discourse and humoral theories, which focused on individuals within a milieu, and *incorporates* that milieu into the individual. Moreover, Bernard’s focus on “independence” performs significant biopolitical work—through, for example, his belief that the more independent a warm-blooded animal is, the more it is contingent on a protective environment.⁵⁵ Bernard’s metaphorization of the individual as “naturally autonomous” in its environment naturalizes the individual as a biological monad.⁵⁶ His theory of physiology thus reinscribes liberal subjectivity, a subjectivity based on bounded, walled individual sovereignty. The regulation of public health through intervention on this individual is a disciplinary technology, but like the panopticon and the military genealogy of the martial metaphor, its operation remains partly invisible in order to create the imaginary boundaries of the liberal subject.

At this intersection, the different orders through which the martial metaphor permeates become clear: the nation, the military, the public, the individual, even the milieu interior, where it embodies the logic of national sovereignty at a cellular level. Metchnikoff accounted for Bernard’s “free and independent” quality, the *sine qua non* of an organism’s sovereignty, through the theory of immunity, an activity by which the organism continually produces its own

⁵⁴ Quoted in Bernd Rosslenbroich, *On the Origin of Autonomy: A New Look at the Major Transitions in Evolution* (New York: Springer, 2016), 26.

⁵⁵ Cohen, *A Body Worth Defending*, 196.

⁵⁶ *Ibid.*, 199.

“localized integrity.”⁵⁷ What is significant about this bodily incorporation of agency is that it provides a physiological naturalization of the individual, as a “free and independent” life responsible for its own health, while still allowing a site for state intervention. This intervention often took the form of public health operating through the whole by shaping the conditions for the individual’s internalization of disciplinary techniques. As we have seen, as early as Shelley, medicine was required to constantly work through the central tension of the Victorian era: that between the individual and the whole.

Both Doyle and Bernard, while recognizing that infectious disease affects populations, narrow the scope of the medical down into the interior of the individual at a cellular level. On the one hand, this heralds Metchnikoff’s picture of immunity as organismal self-defense.⁵⁸ On the other, it highlights the martial metaphor as an individualizing technique. Under the paradigm of germ theory, post-Koch, diseases like cholera don’t invade nations as ghostly miasmas or essentialized figures themselves; infected individuals do. This becomes a crucial point of contention for Doyle and for British society after the turn of the century, as the individual body becomes the node at which the nation defends itself against infection, specifically through vaccination, in both military and public health. This is a new stage in the development of empire, one where the concern is not only about what soldiers might encounter “out there,” but about what colonized subjects might bring back to England. This is not to say that bacteriology was necessarily a “liberating” discourse, however. As Latour suggests, the developments of microbiology redefined the idea of individual liberty, insofar as the government appropriated the right to investigate and surveil individual citizens and limit their movements, on the grounds that

⁵⁷ *Ibid.*, 258.

⁵⁸ *Ibid.*, 196.

no one had the right to infect anyone else.⁵⁹ To this effect, the martial metaphor naturalizes the desire and the imperative of the liberal subject to accept this individual intervention, once it has been developed, in order secure his or her body—to make it, in Cohen’s words, “a body worth defending.” This in turn makes the individuals into subjects of the state as a protective and defensive force.

What Doyle and Bernard share, moreover, in terms of the martial metaphor, is a complication of the division between health and sickness that is not unlike that between poison and remedy. This is less apparent in Doyle’s medical writings than in his Holmes stories, in which the source of the foreign biocontaminant is often revealed to be an Englishman corrupted by empire, like Roylott or like Jonathan Small, who brings the sub-human Tonga with his poisonous darts. These contrast with characters like Neville St. Claire from “The Man with the Twisted Lip,” who steps out of bourgeoisie norms but does not undergo a constitutional change because of his foreign contact; his pathology can be simply washed off the surface, as Holmes does to reveal St. Claire’s disguise. In this way, Holmes disciplines without involving the repressive state apparatus of the police; he and Watson handle society’s corruption internally.

The blurriness here maps onto theories of health and disease. For Bernard, health and sickness are not so much opposites as points on a spectrum. As Georges Canguilhem observes, Bernard identifies the ontological status of disease less in terms of its proximate invading cause—a microorganism, for instance—than in terms of the dysfunction of bodily operations that causes damage to tissue.⁶⁰ The essence of tuberculosis, for instance, is not *Mycobacterium tuberculosis*, nor the blood and sputum that collect in the lungs and cause suffocation. Rather, it is the body’s

⁵⁹ *The Pasteurization of France* (Cambridge, MA: Harvard University Press, 1993), 123.

⁶⁰ Canguilhem, *The Normal and the Pathological*, ch. 2.

own “normal” mechanisms causing the inflammatory response that yields the blood and sputum that cause hypoxia.⁶¹ This kind of chain of events mirrors Bernard’s weapon of choice in the medical war, his experiments of destruction, in which the researcher provokes the normal physiological mechanism into becoming pathological.

What is significant about this ambiguity between health and sickness in terms of a martial spectrum—and which is present in Doyle’s fiction but not in his medical writings—is that it bespeaks the invisibility of the martial metaphor. While Doyle’s medical side wants to affirm this binary distinction along with the martial metaphor, his fiction destabilizes its validity insofar it maps onto nation and empire—England, and even Englishness itself, is always already pathogenic. Immunity operates in a similar paradigm.

Metchnikoff linked the juridical concept of immunity to the body’s natural biology through the metaphor of war. Before Metchnikoff’s cellular immunity, immunity in the body was understood either as a constitutional predisposition to disease or as *medicatrix naturae*, the way individuals harmonize themselves with the environment. Metchnikoff reimaged the healing power of nature inside the body in the form of phagocytes, construed as cellular agents of the body in a martial capacity: “It is evident that [pathogenic] spores are attacked by blood cells and probably killed or disintegrated. Thus the function of blood cells is to protect the body against

⁶¹ Bernard does not give this example of tuberculosis, but it is emblematic of his theories on pathology. In further detail: the body’s macrophages identify the bacteria in the lung alveoli, causing these immune system agents to “attack” the alveoli. The macrophages attempt to engulf the bacteria, but they cannot do so completely, and the bacteria infect the macrophages themselves, feeding on them to reproduce. The immune system forms a wall around the area in which this occurs, known as a granuloma. This either creates scar tissue or causes the cordoned tissue to necrotize, producing the blood, sputum, and dead, non-functioning tissue that ultimately suffocate the individual—instead of the alveolar sacs providing gas exchange, the lungs fill with fluid, making breathing impossible. The case demonstrates how the actual processes that cause signs and symptoms are, in fact, normal physiological functions. Leonard V. Crowley, *An Introduction to Human Disease: Pathology and Pathophysiology Correlations* (Burlington, MA: Jones & Bartlett Learning, 2013), 386–89.

infectious agents”; consequently, the phagocyte “represents the healing power of nature.”⁶² Metchnikoff’s model also fits into Bernard’s theory of the pathological: “When one accepts the concept that phagocytes fight directly against pathogens, it becomes understandable that inflammation is a defensive mechanism against bacterial infections.”⁶³ It is important to note that at this point, Koch and Metchnikoff disagreed on the specific physiological mechanisms that marshaled natural defense.⁶⁴ Although Koch eventually embraced immunity, he was also more concerned with microbes themselves and their infection of the body than with the body’s response. What is significant here is that both Koch and Metchnikoff belonged to the same system of thought that invoked the martial metaphor at the cellular and molecular levels of the body; the same system Doyle reproduces in “Life and Death.” This work would lead directly to the technological developments of exogenous medical agents for aiding or supplanting immune defense. In other words, public hygiene was no longer the only weapon against disease; the new wave of defenses included drugs, vaccines, and anti-toxins—technologies that are also plot devices and logics informing Holmes and Watson’s detection. Doyle suggested that this new mode of medico-military warfare—the use of “weapons”—“represents an entirely new departure in medicine.”⁶⁵

Conan Doyle and Robert Koch’s Battle with Tuberculosis

⁶² Quoted in Cohen, *A Body Worth Defending*, 260.

⁶³ Quoted in *ibid.*

⁶⁴ Anderson and Mackay, *Intolerant Bodies*, 28.

⁶⁵ “Dr. Koch and His Cure,” *Review of Reviews*, November 1890, 556. Hereafter cited parenthetically in the text as *KC*.

As early as 1881, Thomas Huxley foresaw this “new departure,” characterizing the future of medications as “pharmacological torpedoes” and citing potentially toxic yet curative substances like strychnine. Having brought the etiologies of many infectious diseases under the gaze of the microscope, bacteriology’s next step was to materialize a chemical cure that targeted microbial agents rather than symptoms. Furthermore, Huxley’s vision included the targeting of specific diseases and compromised tissues, heralding the drug-receptor theory and antimicrobial chemotherapy of the early twentieth century.⁶⁶ Doyle and Koch converged on realization of this dream in 1890, marking a significant moment for the martial metaphor in the development of “weapons” against diseases that had already intruded into the patient’s body, in contrast to inoculation, which worked prophylactically.

After “Life and Death,” Doyle’s next major publication on bacteriological discourse in the periodical press was an essay for the *Review of Reviews* in which he detailed Koch’s claim at developing the first pharmacological weapon against bacteria. By the late 1880s, Koch had demonstrated the bacterial etiology of a number of diseases, including anthrax and typhoid, all of which he described in martial terms, but what brought Doyle and Koch together was tuberculosis. In 1882, Koch demonstrated the existence and pathogenicity of *Mycobacterium tuberculosis*. Only eight years later, he announced a cure for it. A number of scholars and Doyle himself have indicated that Koch was pressured by the government, in the competitive atmosphere between France, Germany, and England, to discover new microorganisms and find a way to cure one rather than merely inoculate against it. Koch suggested that his cure, Tuberculin, would be the first demonstrated chemotherapy. Doctors and patients alike flocked to Germany to see it. In November of 1890, Doyle, a physician whose wife suffered from consumption, joined them.

⁶⁶ At the beginnings of pharmacology and in its broadest definition, *chemotherapy* denotes the use of specific chemical agents as treatments for specific diseases.

There are a number parallels between Doyle's essays "Koch's Cure" and "Life and Death in Blood," particularly in their shared language of colonialism and the military. For instance, the comparison between cultivating infections, as Koch was doing, and growing the monkshood vegetable poison is replicated verbatim. The reader is also given the same image of being guided through Koch's laboratory:

Here, too, under the microscope may be seen the prepared slides which contain specimens of those bacilli of disease which have already been isolated. This one, stained with logwood, where little purple dots, like grains of pepper, are sprinkled thickly over the field, is a demonstration of that deadly tubercle-bacillus which has harassed mankind from the dawn of time, and yet has become visible to him only during the last eight years. Here, under the next object glass, are little pink curved creatures, so minute as to be hardly visible under the power of 700 diameters which we are using. Yet these pretty and infinitely fragile things are the accursed comma-bacilli of cholera, the most terrible scourge which has ever devastated the microbe-ridden earth. Here, too, is the little rod-shaped filament of the Bacillus anthracis, the curving tendrils of the Obermeyer spirillus, the eat spores of Bacillus prodigiosus, and the jointed ranches of Aspergillus. It is a strange thing to look upon these utterly insignificant creatures, and to realize that in one year they would claim more victims from the human race than all the tigers who have ever trod a jungle. A satire, indeed, it is upon the majesty of man when we look at these infinitesimal and contemptible creatures which have it in their power to overthrow the strongest intellect and to shatter the most robust frame. (*KC*, 552)

Here, the perspective is on the human order, highlighting the seeming contradiction between the physical smallness of microbes and the magnitude of their war against man. The bacteria threaten the sovereignty of humankind in the great chain of being. If, in colonial settings, humans are threatened by savage beasts—the mention of tigers recalls their appearance in Doyle's earlier essay—then nowhere on the "microbe-ridden earth" are they safe from these "utterly insignificant creatures." Man's "majesty"—his sovereignty in physical health and intellect—is under siege and is readily "overthrow[n]" by "infinitesimal and contemptible creatures." The political metaphors are not accidental: Doyle challenges the physicality of material strength in number and size. In contrast to his approach in "Life and Death," he doesn't conflate the microscopic with the human-sized; instead, he makes the same suggestion as Holmes in *The Sign of Four*: "Man's greatness lies his perception of his own smallness" (*SF*, 176).

This is not to suggest that Doyle was resigned to the microbe; quite the opposite. His underscoring of man's susceptibility was a rhetorical strategy for inculcating the martial metaphor and its regulatory practices. He invited Victorian readers to grasp a completely new paradigm of medicine and health, one in which doctors, public health politicians, and Poor Law guardians were not enough. Before bacteriology, humankind had no idea of the extent to which it was at war with disease. The situation was much worse than the sanitarians thought: microbial threats could be present even without visible filth or noisome miasma. What readers internalized from "Life and Death in Blood" was that the power to defend against microbes lay not with hygienically productive subjects, as Kingsley thought, but with specialized professionals: bacteriologists, pharmacologists, and immunologists were the wave of the future.

Doyle made Koch a hero for his microscopic vision and his ability to translate colonial imperatives into biomedical practices. Humankind needed medico-scientific experts like Koch who thought and worked like Sherlock Holmes: "Koch is the great master mind . . . which is rapidly bringing under subjection those unruly tribes of deadly micro-organisms which are the last creatures in the organic world to submit to the sway of man" (*KC*, 552). While Holmes can hunt down and bring under control the imperial lumpenproletariat and colonial others that invade the metropole, Koch subjects to control the inferior races—codified as "tribes"—of microbes that have yet to submit to humankind's rule. Here the work of bacteriology is analogized to colonial occupation and subjugation. It is also no coincidence that Koch's research in Germany is framed as a military, imperial project: this was its function. Doyle cites Koch's government-initiated investigations into the 1883 cholera epidemic in Egypt. The same offensive, expansionist rhetoric is present in Koch's own reflections on medical progress. In 1898, referring to the preventative function of sanitation—and, I would suggest, vaccination—he wrote, "In the past one took a more defensive attitude . . . We have now moved away from this defensive point of view and have

seized the offensive. We must be prepared, first, to detect the infectious material easily and with certainty, and second, destroy it.”⁶⁷ Koch’s vision of creating a compound, a kind of internal antiseptic,⁶⁸ to fight a disease already acquired represents this mode of offensive medico-military war.

Koch’s offensive weapon, even in Doyle’s characterization, embodies the biopolitical tenet of making live and letting die at a histological level. When Doyle saw the means of destroying infectious tubercular material in Koch’s laboratory, he realized that it was not the weapon people had hoped for—what was already being called “The Remedy” and “Koch’s lymph.” Tuberculin’s actual nature and composition were still a secret.⁶⁹ But Doyle clarified the matter when it became sensationalized in the press: “It must never be lost sight of that Koch has never claimed that his fluid kills the tubercle. On the contrary, it has no effect upon it, but destroys the low form of tissue in the meshes of which the bacilli lie” (*KC*, 556): it does not kill the bacteria but causes necrosis of the infected tissue, the hope being that the bacteria would die along with it; in other words, it lets it die.

The hope, however, proved false. In one of his most compelling—if probably disappointing—uses of the martial metaphor, Doyle asserted that tuberculin “continually removes the traces of the enemy, but it still leaves him deep in the invaded country” (556). If we read this in terms of Holmes and Watson’s work, we can see how tuberculosis operates like a foreign invader and imperial lumpenproletariat. The detective and the military doctor work to eliminate

⁶⁷ Quoted in Otis, *Membranes*, 33.

⁶⁸ Thomas Goetz, *The Remedy: Robert Koch, Arthur Conan Doyle, and the Quest to Cure Tuberculosis* (New York: Gotham, 2014), 172.

⁶⁹ It would later be revealed that it was composed of a dead culture of the bacteria, extracted from lymph, mixed with water and glycerin.

or, in an appropriately biopolitical description, “slough” England’s native corruption first: if they destroy the weak and diseased Englishmen, they neutralize the foreign invaders;⁷⁰ by eliminating people like Jonathan Small and Royslott, they can keep out the likes of Tonga and the swamp adder. They cannot, however, remove the all of “the enemy . . . deep in the invaded country.”

Tuberculin occupies a significant place in the history of the martial metaphor. On one level, it was a crucial actor in bringing Doyle and Koch together and giving Doyle the opportunity to propagate the metaphor through a widely circulated story. On another level, even though it was a disappointment, it was productive in the fight against tuberculosis in other ways. Doyle saw early on its significant diagnostic potential, and it is still used for this.⁷¹ In addition, the initial uncertainty over the drug’s efficacy led to more systematic protocols and methods for evaluating therapeutic interventions and contributed to what is known as scientific or evidence-based medicine. Although Koch was searching for a kind of internal antiseptic rather than a vaccination, his ineffective cure seemed closer to the latter. In either case, and accounting for its spectacular failure, tuberculin was a significant anticipant of Paul Ehrlich’s “magic bullet,” the first successfully synthesized materialization of Huxley’s torpedo, which I discuss in the concluding chapter. What we see here, at the intersection of immunology, bacteriology, toxicology, and pharmacology is the not only how the martial metaphor came to be naturalized inside the body but also how medicine worked with the new epistemology to create a supplementary, exogenous way of bolstering or supplanting the body’s natural defenses against infectious disease.

⁷⁰ Otis, *Membranes*, 109–10.

⁷¹ The compound remains in routine use today in the form of pure protein derivative (PPD) TB tests.

II

On the Front Lines of the Boer War

I have so far discussed the explicit operation of the martial metaphor in Doyle's medical writings and its subtler, nearly invisible deployment in the Sherlock Holmes stories before the end of the century. I showed how the metaphor underpins the work Holmes and Watson do with respect to Englishness by way of bacteriology and immunology. In other words, I have articulated how it works as an invisible metaphor guiding Doyle's fiction while appearing as an explicit one in his medical writings.

Before 1899, there were few material connections between medicine and war in Doyle's writings. That is, he didn't discuss military medicine. (An exception was his letter on the CD Acts.) But with the outbreak of the Boer War, Doyle came to be personally invested in the martial metaphor in a unique way. Unlike the previous authors to deploy the metaphor, Doyle's connection to the military was firsthand experience. In this section, I argue that Doyle himself embodied the martial metaphor through his service in the Boer War, a conflict that exacerbated anxieties over the degeneration of the British race. Doyle's experiences with disease in South Africa led him not only to continue deploying the metaphor in his medical writings, but to use it as a plot device and a conceit in two Holmes stories in the early twentieth century. Facing a weakening social body, Doyle reaffirmed medicine-as-war in the popular imaginary in a more explicit and threatening capacity, rather than letting it do its biopolitical work below the surface and under the guise of detection, as he had before 1899.

Doyle performed the martial metaphor during the Boer War, adopting in a fitting irony a defining characteristic of John Watson: he practiced military medicine. After being rejected as a soldier because of his age, he signed on to take command of a hospital. The rejection itself has significance as part of a trend the British would have to come to terms with after the war: nearly

two-thirds of recruits were turned away from enlistment for poor health.⁷² These recruits came primarily from the working class, who formed the mass of the army as enlisted men. The conditions of the war tested the health of the British social body, and in 1899 it seemed to have failed miserably.⁷³ The fin-de-siècle anxieties over degeneration that appeared in Doyle's earlier fiction and in Stoker's *Dracula* appeared to have been realized. It was no longer just the loungers and idlers of empire who were contaminating England; the very stock of bodies that sustained the country's labor and military force was diseased.

The Boer War was the sequel to an earlier campaign in South Africa against the Boers, who were Calvinist Dutch farmers. The first conflict began after Britain tried to assert full control over South Africa and forced the Boers out of their settled coastal regions to more inland territories, Orange Free State and Transvaal. In 1877, the British annexed Transvaal and set off the first Boer War, which led to the Boers gaining independence. In 1885, gold was discovered in Transvaal, and the British found an economic incentive for taking the territory, adding to their already festering anxieties over possible intervention by Germany. The local Afrikaner government was not amenable to British interests, however, which led to a revolt by British occupants against the Boers. When this failed, Britain began increasing its military presence to put pressure on the government. When the Afrikaner president, Paul Krauger, demanded they withdraw, the British refused and war was declared. This was the bloodiest and most costly war fought by the Victorian army, who were plagued with long sieges.⁷⁴ Moreover, due to the British

⁷² Rosemary Rees, *Poverty and Public Health, 1815–1948* (Oxford: Heinemann, 2001), 82.

⁷³ This poor health of the Boer War recruits was a well-known interpretation of significance to Victorian and Edwardian culture. See John Peck, *War and Victorian Literature*.

⁷⁴ *Ibid.*, 165.

invention of concentration camp, the war proved highly unpopular in England and abroad, as I show in the following section.

The war was also biologically taxing: it posed two challenges to the health and fitness of the British as a race, which highlight the inextricable imbrication of medicine with military imperatives. The first was the vitality of the Boers pitted against the British soldiers; the second was the typhoid bacillus, *Salmonella typhi*, also known as enteric fever—the same ailment Watson is recovering from when he first returns to England in *A Study in Scarlet*. Doyle compounds typhoid into the mass of munitions dealt by the Boers in his telling: “On the morning of February 5th the army sallied forth once more to have another try to win a way to Ladysmith. It was known that enteric was rife in the town, that shell and bullet and typhoid germ had struck down a terrible proportion of the garrison.”⁷⁵ The combination of the two solidifies the metaphor by conflating bullet and bacillus.

In the first enemy, the Boers themselves, the British were not fighting ill-equipped and poorly conditioned natives. Doyle portrays the Boers as a more evolved race in martial prowess. He opens his 552-page tract *The Great Boer War* by foregrounding the connections between biology, evolution, and martial prowess in the enemy:

Take a community of Dutchmen of the type of those who defended themselves for fifty years against all the power of Spain at a time when Spain was the greatest power in the world. Intermix with them a strain of those inflexible French Huguenots who gave up home and fortune and left their country for ever at the time of the revocation of the Edict of Nantes. The product must obviously be one of the most rugged, virile, unconquerable races ever seen upon earth. Take this formidable people and train them for seven generations in constant warfare against savage men and ferocious beasts, in circumstances under which no weakling could survive, place them so that they acquire exceptional skill with weapons and in horsemanship, give them a country which is eminently suited to the tactics of the huntsman, the marksman, and the rider. Then, finally, put a finer temper upon their military qualities by a dour fatalistic Old Testament religion and an ardent and consuming patriotism. Combine all these qualities and all these

⁷⁵ Arthur Conan Doyle, *The Great Boer War* (London: Smith, Elder, 1900), 337. Hereafter cited in the text as *BW*.

impulses in one individual, and you have the modern Boer—the most formidable antagonist who ever crossed the path of Imperial Britain. (*BW*, 1–2)

The Boers were trained by fighting with the most savage of beasts; their bloodlines linked them to historically famed warriors, like Dracula's martial lineage; and they were hardened to their tropical climate, forming themselves a defense against endemic tropical illness by a kind of evolution. It is significant that although Doyle describes the Boers in somewhat brutish terms, they nevertheless "evolve," a trait that no doubt emerges from the fact that they come from European stock, in contrast to a population like the Zulus. Thus, they are a kind of perfect storm of primitivism and evolution. The Boers' military prowess can be read in the logic of immunity insofar as they developed their strength through exposure. The British, by contrast, lack the same inoculation through exposure to hazardous, physically trying warfare.

One often-cited example of military failure that has been linked to Doyle's fascination with invisible threats such as bacteria is the Boer guerrilla tactic of digging trenches and hiding in vantage points to slaughter British soldiers with trained snipers.⁷⁶ Doyle was critical of the reluctance of British commanders to adapt to modern warfare, citing the threat of "hidden guns" in both of his treatments of the war (*BW*, 95, 190, 331).⁷⁷ It is telling that even after the war, Doyle worked with the British on prophylactic techniques against invisible enemies, such as

⁷⁶ Otis, *Membranes*, 94; Peck, *War and Victorian Literature*, 166. In another connection between Holmes and the Boer War, Otis suggests that Doyle admired the Boers' ability to adapt to their enemies' tactics—the skill Holmes employs when disguising himself to move freely among potential enemies. Laura Otis, "The Empire Bites Back: Sherlock Holmes as an Imperial Immune System," *Studies in 20th century literature* 22, no. 1 (1998): 37.

⁷⁷ *The War in South Africa: Its Causes and Conduct* (New York: McClure, Phillips, and Co, 1902), 10. Hereafter cited parenthetically in the text as *WS*.

stealth attacks by submarines.⁷⁸ This shows how his medical and military interests coincided to make him a prominent figure in circulating the martial metaphor.

As Doyle suggests, the British army had not been hardened by warfare over the previous century. This implication belies the social construction of the English body. Although Doyle doesn't address the nature of the English constitution in his text, we can take into consideration the consistent themes of corruptibility and degeneration in his earlier Holmes stories and the fact that even as the war was commencing, England had to come to terms with the vitality of its population. Although Doyle was rejected for his age, the fact that nearly two-thirds of recruits were simply not healthy enough for enlistment suggested endemic ill-health in the population. By 1901, the military had lowered its health standards, for instance by decreasing the height requirement, as height was linked to robustness. This necessity contradicted the notion that the male middle-class body could be the index of national health—which by this time was equally susceptible to degeneration—as military vitality was not as contingent on him as it was on “the great unwashed.” The country's labor and military body could no longer be viewed as basically healthy enough. Moreover, as we will see, even the upper classes proved defenseless against degeneration.

The second way the Boer War taxed the British was in terms of military medicine and infectious disease. As in Crimea, the British fought disease alongside robust human foes, and the former produced significantly more casualties. The enemy here was not unlike cholera in the Crimea. In this case, it was typhoid, also a waterborne pathogen and frequently spread by poor sanitation around waterworks. The Boers carried out a form of biological warfare,⁷⁹ seizing the

⁷⁸ Otis, *Membranes*, 94.

⁷⁹ *Ibid.*

waterworks and giving the British no choice but to drink from a contaminated water supply in Bloemfontein during their long entrenchment.⁸⁰ Doyle knew that typhoid was waterborne and caused by bacteria, but the military culture was less concerned despite its experiences earlier in the century, and hygienic measures were not enforced. Deploying again the trope of disease being worse than war, Doyle wrote, “If bad water can cost us more than all the bullets of the enemy then surely it is worth our while to make the drinking of unboiled water a military offense” (*BW*, 371). In the end, poor hygienic measures combined with a contaminated water supply led to a massive outbreak. Doyle, however, was able to fight the disease only after it seized a soldier’s body.

The typhoid epidemic in the Boer War played a significant role in the history of the martial metaphor, as it tied together military medicine and civilian public health by way of martial rhetoric, a linkage Doyle was at the center of. Hygienic measures aside, an antityphoid vaccine existed that showed a promising success rate before the war broke out. Sir Almroth Wright developed it in 1896 while working as a professor at the Royal Army College at Netley.⁸¹ The vaccine itself, the same one that would be made available to civilian populations, was developed from military research, like so many other medical technologies and practices. Doyle campaigned unsuccessfully to have the army inoculate soldiers with it before the war. He wrote, “All through the campaign, while the machinery for curing disease was excellent, that for preventing it was elementary or absent. . . . With precautions and with inoculation all those lives might have been saved” (*BW*, 371). These critiques would draw medicine into a closer

⁸⁰ V. J. Cirillo, “Arthur Conan Doyle (1859–1930): Physician During the Typhoid Epidemic in the Anglo-Boer War (1899–1902),” *Journal of medical biography* 22, no. 1 (2014): 5.

⁸¹ The vaccine was also developed simultaneously by researchers in Germany.

relationship with war, showing that in logistical terms, it was an essential part of the maintenance of a army, and by extension a nation.⁸²

Reflecting on this time, Doyle invoked the martial metaphor again: “We lost more from enteric than from the bullet in South Africa, and it is sad to think that nearly all could have been saved had Almroth Wright’s discovery been properly appreciated. . . . If the army had all been inoculated, this would, I think, have been absolutely the healthiest war on record.”⁸³ Of course, even if that had been done, that healthiest group of military men would not have been a representative sample of English health, according to the infamous recruiting statistics cited above. The anxieties surrounding degeneration and the lack of healthy recruits still contradicted Doyle’s speculation. Doyle’s autobiography, *Memories and Adventures* (1924), was followed three years later by “The Adventure of the Blanched Soldier,” his only work of fiction to deal with disease and the Boer War, which I discuss at the end of this chapter.

In his 1900 letter to the *British Medical Journal*, “The War in South Africa,” Doyle makes a case for the common orderly as a soldier, citing the dire conditions at Bloemfontein and the medical and medico-martial efforts to combat them. He contends that the outbreak of enteric fever involved a “calamity and magnitude” unrivaled in modern warfare.⁸⁴ In contrast to his earlier espousal of physicians and scientific researchers—and even the wonders of Sherlock Holmes—in this letter Doyle’s primary focus is the work of medical men and orderlies in battling the disease.

⁸² I’m referring back to Julian Reid’s characterization of “logistical life,” discussed in the introduction, as life shaped under the organizational needs of the modern state to prepare for war. Reid, *The Biopolitics of the War on Terror*, 13, 18.

⁸³ *Memories and Adventures* (Cambridge: Cambridge University Press, 2012), 159.

⁸⁴ “The War in South Africa, the Epidemic of Enteric Fever at Bloemfontein,” *British Medical Journal* 2, no. 2062 (1900): 49.

Doyle makes a point of explicitly contrasting actual war with medical work. However, as in the case of Kingsley's sanitary lectures, the rhetorical move of making disease look worse than war only serves to affirm the martial metaphor. The orderly "is not a picturesque figure," Doyle writes. He is instead, a humble, working-class man, one who enjoys not officially commendable martial heroics but the real work of saving lives:

We have not the trim, well-nourished army man, but we have recruited from the St. John Ambulance men, who are drawn, in this particular instance, from the mill hands of a northern town. They were not very strong to start with, and the poor fellows are ghastly now. There is none of the dash and glory of war about the sallow, tired men in the dingy khaki suits—which, for the sake of the public health, we will hope may never see England again. And yet they are patriots, these men; for many of them have accepted a smaller wage in order to take on these arduous duties, and they are facing danger for twelve hours of the twenty-four, just as real and much more repulsive than the scout who rides up to the strange kopje or the gunner who stands to his gun with pom-pom quaking at him from the hill.⁸⁵

On the surface, this does not romanticize fighting typhoid in the field hospital: "There is none of the dash and glory of war." By refusing to romanticize the medico-military battle, in the manner, for example, of Tennyson's "Charge of the Light Brigade," Doyle indicates that the "grunt work" of medical men and orderlies not only has value and is brave but also sustains the army and the empire at large.

The construction of heroism does, however, invoke a kind of romantic military hero. The orderlies working on the front line against enteric fever encounter disease up close and personally; it is just as real as and more repulsive than the gunner firing from a distance or the scout taking a hill. This comparison situates the orderly as a frontline infantryman—that base unit in the mass that the entire military apparatus depends on—and contrasts his work with the guerrilla tactics of the Boers, as in the case of the distant rifleman who is targeted by distant artillery. This construction of the working-class man makes fighting disease a matter of English

⁸⁵ Ibid.

pride for people of all walks of life, even at the lowest socio-economic level. Their work is not only gruesome but, because of the contagious nature of typhoid, dangerous. By characterizing medical heroes this way, Doyle conveys hope in power of the English laboring body to defend the nation against pathology and degeneration—a position that is ultimately contradicted in much of his fiction. Doyle's letter does suggest that medical warfare against declining inherent health and foreign infections is a matter of national pride. But with respect to the medical campaign of the Boer War, as with the charge of the Light Brigade, "someone had blundered." These working class heroes were there because of poor decisions by the officials in charge of the campaign's medical component, the Royal Army Medical Corps. The rate of infection among vaccinated soldiers was 2%, in contrast to 14% among the unvaccinated.⁸⁶ The vaccine that Doyle espoused so strongly emerged, like so many technologies of public health, from military medicine, but it never made it to the men on the ground.

Doyle's campaign to make the antityphoid vaccine compulsory was part of larger, drawn-out debate that began with Boer War and continued into the beginnings of the Great War. By the end of the first year of World War One, citing the number of deaths to typhoid in the Boer War and convinced by the most recent research, the Royal Army Medical Corps ensured that 90% of the troops were vaccinated, resulting in a typhoid incidence in World War One of 2.5 per 1000, compared to 105 per 1000 during the Boer War.⁸⁷ While the debate between the vaccinationists and anti-vaccinationists was a contentious one,⁸⁸ closely mirrored by our own contemporary debates, the Boer War ultimately showed the British that the best offense was in fact a good

⁸⁶ Harold Ellis, *A History of Surgery* (London: Greenwich Medical Media, 2001), 137.

⁸⁷ *Ibid.*

⁸⁸ See Anne Hardy, "'Straight Back to Barbarism': Antityphoid Inoculation and the Great War, 1914," *Bulletin of the History of Medicine* 74, no. 2 (2000): 269.

immune defense aided by inoculation. As Anne Hardy has contended, what drove the debate over compulsory vaccination for soldiers during the Edwardian era was the tension between individual freedom, under the aegis of liberalism, and the increasingly political jurisdiction over public health in disease prevention,⁸⁹ which as we have seen was the central tension in the nexus of medicine and politics in the nineteenth century. Hardy suggests that this “fight” over compulsory vaccination reflected the larger stakes of the acceptance of modern epidemiological measures, post-bacteriology, in the public imaginary: “In the autumn of 1914, therefore, battle was joined between the medical proponents of antityphoid inoculation and the antivaccinationists over the hearts and minds of Britain’s fighting men—who, representatives of the common man, of the general public will, were required either to demonstrate their faith in the new immunology, or to reject it outright.”⁹⁰

By 1915, the organizational efforts of the Royal Army Medical Corps, its massive propaganda campaign to influence the opinions of soldiers with pressure from officers and fellow enlisted men, compelled those individuals who still held out. Sir William Osler, one of the most renowned physicians of the late nineteenth century, who had battled the antivivisectionists alongside Doyle, made the case that medicine was a crucial weapon in war. In an influential Oxford penny pamphlet, widely circulated during the war and taken from his address at Camp Churn on the Berkshire Downs—aptly titled *Bullets and Bacilli*—he made the case for vaccination by appealing to the military ethos: “It can be prevented,” wrote Osler; “it *must be prevented*; but meanwhile the decision is in your hands, and I know it will be in favor of King and

⁸⁹ Ibid.

⁹⁰ Ibid., 284.

Country.”⁹¹ In this case, the martial metaphor worked as a disciplinary technology for soldiers, making them internalize the medical war to shape their own conduct and choose vaccination.

Although the debate continued after the war, it is clear that historical cases of military medical dealings with vaccination and infectious disease were central to the development, testing, and deployment of the vaccine in civilian public health. The vaccine was never made compulsory during the Great War, however; rather, the majority individual soldiers accepted it voluntarily.⁹² What is critical here is the resistance to overt, juridical imposition of public health on the individual; in the case of the soldiers, we see the paradigm of Foucault’s docile bodies. Although Doyle advocated for compulsory vaccination, the mobilization of medicine as war was part of the larger movement to get enlisted soldiers, and the working class that they came from, to accept this intervention into personal liberty and into the body. And beyond vaccination, the Boer War proved to be another occasion for Doyle to reflect on how populations were “medically governed.”

The Biopolitical Labs of Modernity in South Africa

The British management of civilian populations during the Boer War proved to be a significant moment in biopolitical history, demonstrating a nexus of medicine, the military, and colonial politics, the ideal cultural medium for the martial metaphor to thrive in. It was during the South African conflict that the British developed concentration camps to manage the women, children, and other non-combatants of the territory they seized. I have mentioned Agamben’s contention that the camp emblemizes the state of exception, citing the most obvious case of the Nazis.⁹³

⁹¹ William Osler, “Bacilli and Bullets,” (Humphrey: Oxford University Press, 1914), 8.

⁹² Hardy, “Straight Back to Barbarism,” 288.

⁹³ This argument has notably also been made by Hannah Arendt in her linkage of the

Agamben does connect the camps to colonization, but in a more philological capacity. But with the Boer War camps, the connection was quite material. They were precursors, in accordance with Mbembe's suggestion that biopolitical techniques and experiments are exercised in the colonies before the homeland. These camps, with their non-native populations, can be viewed as one of the many instances in which a colony serves as a "lab of modernity".⁹⁴ They were both a place for testing biopolitical techniques before deploying them in Europe, and a place for literally testing medical technologies.

Death and disease were rampant in the British camps. Furthermore, the British exercised a scorched-earth policy, making farmland unusable in the foreseeable future. The practice here was an explicit letting-die by controlling the material conditions of existence: food, water, sanitation, and the circulation of bodies. This tactic also disrupted communication between soldiers and civilians. We can understand this biopolitical exercise as a form of offensive medical warfare pursued in response to the Boer's guerilla tactics and their "biological warfare," which precipitated the typhoid that crippled the British.⁹⁵ By controlling the social determinants of

racial origins of imperialism to the Holocaust. See Hannah Arendt, *The Origins of Totalitarianism* (New York: Harcourt, Brace & World, 1966).

⁹⁴ See Arnold, *Colonizing the Body*; Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Cambridge, MA: MIT Press, 1989); Frederick Cooper and Ann Laura Stoler, "Between Metropole and Colony," in *Tensions of Empire: Colonial Cultures in a Bourgeois World*, eds. Frederick Cooper and Ann Laura Stoler (Berkeley: University of California Press, 2009).

⁹⁵ At least one scholar has recently suggested that the death camps have been mythologized. Elizabeth van Heyningen argues that once disease and sanitation were under control, these camps served as "experiments in public health" in a productive fashion for both the British and some of the Boers insofar as they built infrastructures for more hygienic water and led to more effective sanitary techniques. See Elizabeth Van Heyningen, "A Tool for Modernisation? The Boer Concentration Camps of the South African War, 1900–1902," *South African Journal of Science* 106, no. 5 & 6 (2010). Even in this capacity, we can see this as an experiment in affirmative biopolitics that could afterward be redeployed in England.

health, the camps acted a counter-siege that attacked the very thing the Boers were at war to protect: their land and population. In a Foucauldian sense, the British attacked the Boer's security apparatus. They laid siege on the biopolitical foundation of their army and population. This marked a turning point in the nature of war: by targeting the Boer guerrillas' base of support through a military intervention on civilians, the British exercised counterinsurgency.

With respect to the campaign against disease and sickness, Doyle didn't just participate in the war, he actively advocated for it and defended it after its conclusion. He offered defenses against the charges of British atrocities in the camps in *The Great Boer War* and, even more assertively, in *The War in South Africa: Its Causes and Conduct*. For this campaigning and "defense" of empire in addition to his medical service, Doyle was knighted in 1902. He was, in effect, knighted through these material intersections of medicine and war. Because of the celebrity of his Holmes fiction, Doyle had enough influence to justify Britain's actions. His work has been credited by some with changing much of the world's opinion on Britain's conduct during the war.⁹⁶ This imprimatur of Doyle's defense of the empire, both as a doctor and as an author, signals the significance of his role as a propagator of the martial metaphor in the service of national and imperial interests. By following the logic that the British were protecting the Boer civilians and insisting that their deaths were due to their not adopting hygienic standards and refusing medical care in favor of more native practices, Doyle announced that the violence of the camp—its state of exception—is justified in the service of civilization. He claimed that most of the deaths were due to the measles, but he actually acknowledged that the measles outbreaks were a result of the creation of the camps:

We cannot deny that the cause of the outbreak of measles was the collection of the women and children by us into the camps. But why were they collected into camps? Because they could not be left on the veldt. And why could they not be left on the veldt?

⁹⁶ Rodin and Key, *Medical Casebook of Doctor Arthur Conan Doyle*, 65.

Because we had destroyed the means of subsistence. And why had we destroyed the means of subsistence? To limit the operations of the mobile bands of guerillas. At the end of every tragedy we are forced back to the common origin of all of them, and made to understand that the nation which obstinately perseveres in a useless guerilla war prepares much trouble for its enemy, but absolute ruin for itself. (*WS*, 85)

This biopolitical exercise was, in Mbembe's terms, warfare turned inward on a population in the "service of civilization."⁹⁷ Under the guise of a civilizing mission to protect the Boers and ensure a rapid peace, this inversion of public health was carried out for the purposes of strategic and psychological warfare. In Doyle's eyes, the ultimate cause was the Boers themselves, as the British, he claimed, were merely responding defensively by forestalling the conditions required for guerrilla groups to exist—thus the Boers were ultimately responsible for their own civilian deaths. By intervening destructively in their means of subsistence and public health, the British military used "medicine," in its larger biopolitical context, as a weapon against the Boers.

One consequence of the martial metaphor, then, is the recruitment of medical epistemologies and technologies as themselves weapons of war. This weaponization of medicine for military and colonial purposes takes other forms, as we will see in the following chapter on tropical medicine. The example of the camps shows how the logic of the martial metaphor leads to the conflation of medicine and war and to material, biopolitical effects that oppose the values associated with medicine, at least in Hippocratic terms: first, to do no harm, and second, to heal.

Beyond the invention of the concentration camp, what the military medical concerns of the Boer War did on a larger scale was link disease on foreign soil to medical anxieties back home, much as Kingsley did with Crimea. The medical failures of the Boer War could thus foster a re-investment in vigilance and the fight against disease in all orders of life, from governmental intervention to personal hygiene and self-care. In this way, the martial metaphor was a useful tool

⁹⁷ Achille Mbembe, "Necropolitics," *Public Culture* 15, no. 1 (2003): 24.

for mobilizing mass social treatments, both in public health and, less overtly, in medical biopolitical management. Unsurprisingly, given the history of biopolitics and sexuality as articulated by Foucault, the target of this vital investment was the children, the future of the race. For instance, after the Committee on Physical Deterioration reported in 1904 on the health of the working class, prompted by the recruitment problems during the war, free school lunches and other benefits were introduced for the urban poor to improve salubrity.⁹⁸ The medical aspects of the war contributed to new biopolitical techniques for fostering security by raising health standards. It was ultimately because of the need to revitalize a biologically and militarily enfeebled nation, aided by Doyle's firsthand experience with military medicine, that disease appears in two Holmes stories after the war as a central plot device in a martial capacity.

Biological Warfare and Military Trauma

Doyle received troves of letters in response to his Sherlock Holmes stories, addressed both to him and to the fictional detective. One of these was written by his friend and mentor Dr. Joseph Bell on May 4, 1892. Bell wrote to Doyle early in his success with the Holmes stories to suggest a plot revolving around a "bacteriological criminal." Doyle replied, "I think a fine thing might be done regarding a bacteriological criminal, but the only fear is that lest you get beyond the average man, whose interest must be held from the first and who won't be interested unless he thoroughly understands."⁹⁹ By the time the Boer War had come and gone, bacteriology was much more widely circulated and popularly understood, at least on a basic level, no doubt partly because of

⁹⁸ Jane Lewis, "Providers, 'Consumers,' the State and the Delivery of Health Care in Twentieth-Century Britain," in *Medicine in Society: Historical Essays*, ed. Andrew Wear (Cambridge: Cambridge University Press, 1992), 322.

⁹⁹ Quoted in Peter D. McDonald, *British Literary Culture and Publishing Practice, 1880–1914* (Cambridge: Cambridge University Press, 1997), 168.

Doyle's own articles. Moreover, the medical problems surrounding the war—both the bacteriological and the racially constitutional—gave Doyle a reason to change his mind about featuring infectious disease as a plot device.

Bell couldn't resist introducing the idea himself in his introduction to the 1893 edition of *A Study in Scarlet*, drawing on connections among detection, national borders, and bacteria. Recalling his contention about bacteriological research being the greatest medical advance in recent history, and comparing the work of detection to the microscopic gaze, he speaks of disease as a matter of Occidental security: "Poison a well at Mecca with the cholera bacillus, and the holy water which the pilgrims carry off in their bottles will infect a continent, and the rags of the victims of the plague will terrify every seaport in Christendom."¹⁰⁰ This narrative of incursion by a biological enemy, which now reads like contemporary bioterrorism, invokes the alien elements that previously took the form of foreigners or lumpenproletariat and shrinks them down to microscopic bacteria. In this capacity, the martial metaphor appears much more visibly: if the British military can weaponize medicine, then medical knowledge can be weaponized and used against England itself. This possibility compounds Kingsley's preoccupation with the natural itself being inimical and Stoker's representation of individuals and other races being a diseased infiltration, because what is naturally pathological can be harnessed intentionally.

In the "The Adventure of the Dying Detective," the martial metaphor operates in terms of biological weaponry. What makes the plot different from either the use of alkaloid poisons or the Boers' seizure of the waterworks is that in "The Dying Detective," bacteria themselves are used as a murder weapon.¹⁰¹ Holmes, apparently dying of the mysterious Sumatran disease "Tapanuli

¹⁰⁰ "Mr. Sherlock Holmes."

¹⁰¹ Other scholars have identified this story's use of bacteria as a "biological weapon." See William A. Sodeman Jr, "Sherlock Holmes and Tropical Medicine: A Centennial Appraisal," *The American Journal of Tropical Medicine and Hygiene* 50, no. 1 (1994); Setu K. Vora,

fever,” asks Watson to seek out one Culverton Smith, “a well-known resident of Sumatra now visiting London. An outbreak of the disease upon his plantation, which was distant from medical aid, caused him to study [the disease] himself with some rather far-reaching consequences.”¹⁰² Holmes’ illness is an illusion, however. He previously suspected Smith of murdering his own brother with a culture of the disease brought from Sumatra. As revenge, Smith sent Holmes a booby-trapped package: “I would not touch that box. You can just see if you look at it sideways where the sharp spring like a viper’s tooth emerges as you open it. I dare say it was by some such device that [Smith’s brother], who stood between this monster and a reversion, was done to death” (*DD*, 444). The puncturing device, recalling the other penetrating devices in the earlier tales, expresses angst about the permeability of the individual’s supposedly hermetic boundaries.¹⁰³ Furthermore, by comparing a technological device—the spring-loaded lancet—to a biological one—the viper’s tooth—Doyle highlights the way foreign, inimical nature, such as the poisonous snake or the bacterium, can be shaped by medical knowledge for malevolent, pathological ends. After having Watson bring Smith for “help,” Holmes tells Smith that he received a box in the mail that drew blood by way of a spring mechanism when he opened it, whereupon Smith reveals his murder plot: “The very one, by George! And it may as well leave the room in my pocket. There goes your last shred of evidence. But you have the truth now, Holmes, and you can die with the knowledge that I killed you” (*DD*, 442). Holmes employs this ruse to get Smith to implicate himself.

“Sherlock Holmes and a Biological Weapon,” *Journal of the Royal Society of Medicine* 95, no. 2 (2002).

¹⁰² “The Adventure of the Dying Detective” in Arthur Conan Doyle, *Sherlock Holmes: The Complete Novels and Stories*, 2 vols., vol. II (2003), 434. Hereafter cited as *DD* parenthetically in the text.

¹⁰³ Otis, *Membranes*, 9.

The figure of Culverton Smith speaks to the broader but recurring discourse of medical anxieties over degeneration. He embodies the sickness he brings back to the metropole: “I saw a great yellow face, coarse-grained and greasy, with heavy, double-chin, and two sullen, menacing gray eyes which glared at me from under tufted and sandy brows” (*DD*, 436). Watson continues, “The skull was of enormous capacity, and yet as I looked down I saw to my amazement that the figure of the man was small and frail, twisted in the shoulders and back like one who has suffered from rickets in his childhood” (*DD*, 437). Smith, however, is not a lumpenproletariat, as Pablo Mukherjee observes: he lives in a respectable area of London and is associated with wealthy British farmers in Sumatra. This links him to a history of colonial greed and disrepute in which British farmers and government representatives failed to aid the local Aceh people against a blockade by the Dutch despite their protests to the British government. Smith’s connection to this scandal undermines a central myth of British imperialism: “its palliative and moral motives for global development.”¹⁰⁴ Like many of Doyle’s corrupted Englishmen, Smith bespeaks colonial guilt and the empire taking revenge on the metropole. Disease, both infectious and degenerative, reveals Britain’s failure to live up to its own mythology, which is contingent on its exerting political and military pressure. The repeated emphasis on twistedness, the connection to childhood disease, and the oversized skull allude to contemporaneous views of degeneration and criminal anthropometrics, except that Smith represents a higher class (than someone like Jonathan

¹⁰⁴ Mukherjee cites Anthony Reids’ recording of how the merchants and planters drew up a “‘violent petition’ and submitted it to London in 1890, condemning the ongoing Dutch blockade against Aceh as being ‘unprecedented in the darkest pages of history’ . . . After this was ignored, Cecil Smith, the then-governor of Singapore and the voice of the British settlers in south-east Asia, again petitioned London to mediate between the Dutch and the Sumatrans, upon which ‘[a]t the Foreign Office, Salisbury icily suggested the Governor be told to mind his own business.’” Mukherjee, “Out-of-the-Way Asiatic Disease,” 85.

Small) being infected with the vices of empire. Thus, the contagion of empire spreads beyond class boundaries, infecting not just the masses but the privileged.

The second concern the story raises for future protection from foreign contagious threats is the fact that Culverton Smith is “not a medical man.” This detail points to the dangers of the circulation of biomedical knowledge. In fact, Smith’s use of a biological weapon suggests an inverted internalization of the martial metaphor, as he uses medicine to fight his own personal battles by spreading disease rather than eliminating it. Like a pathologically inverted Holmes, he is a self-trained professional. And when Watson calls on him, Smith compares his own talents to Holmes’s: “‘I am sorry to hear this,’ said he. ‘I only know Mr. Holmes through some business dealings which we have had, but I have every respect for his talents and his character. He is an amateur of crime, as I am of disease. For him the villain, for me the microbe. There are my prisons’” (*DD*, 437). Pointing to jars on a table, he continues, “Among those gelatine cultivations some of the very worst offenders in the world are now doing time” (*DD*, 437). Smith deploys medical knowledge for his own ends, following through on the sort of threat depicted in H. G. Wells’s “The Stolen Bacillus” (1895), in which a foreign anarchist feigns interest in a London bacteriologist’s work in order to steal a sample of cholera and poison the city’s water supply—similar, in fact, to Joseph Bell’s premonition. The story reveals a dangerous result of thinking of medicine as war: the possibility of biological warfare and terrorism. The misuse of bacteriology, like that of toxicology, is a logical extension of the martial metaphor into the weaponization of medicine.

Finally, of particular note in Culverton Smith’s confession is his experimentation with the disease on colonial subjects. As Holmes malingers and groans in morbid pain, Smith gloats: “Painful, is it? Yes, the coolies used to do some squealing towards the end. Takes you as cramp, I fancy” (*DD*, 441). The knowledge Smith obtained this way not only helped his plantation deal

with the disease but gave him personal knowledge of how to handle, transport, and weaponize the disease without risking self-infection. This work is a more concentrated realization of the martial metaphor than the biopolitical experimentation in South Africa with respect to colonial bodies. The bodies of the “coolies” perform the clinical labor required to produce bacteriological knowledge; these clinical “trials” foreshadow the Nazis’ medical experiments,¹⁰⁵ which alongside later biological warfare research stand out as the most extreme cases in which redeploying the martial metaphor into military operations enables rather than forestalls death and human suffering.

Holmes’s malingering itself signals another weak point in the British social body—a remnant of the poor health discovered during the Boer War—both at the level of the narrative and in contemporaneous medical history. At the narrative level, Holmes never really infected himself and is able to neutralize the threat; this plot betrays the confidence that Britain projects in its ability to protect against foreign, weaponized contagion. Holmes cures the disease through simple investigation: by providing “alternative etiologies” and “controllable causes” for the symptoms of a diseased empire, he constructs a misreading that saves the empire from self-induced toxicity.¹⁰⁶ This narrative technique raises a specter of doubt in the face of the very real possibility of biological weaponry. Outside the scope of Holmes’s and Doyle’s narrative control, however, the historical tale resists such facile allayment. First, the idea of using bacteria as weapons came to fruition in both homicide and war. The Culverton Smith scenario occurred in 1933 in Calcutta, where one Amar Penday was murdered by his step-brother with the help of a physician, who

¹⁰⁵ Ibid., 88. Arendt suggests that the biological justification in Nazism finds its origins in the racial thinking of imperial ideology of nations like Britain, citing writers like Spencer and Huxley. *The Origins of Totalitarianism*, 179–80.

¹⁰⁶ Harris, “Pathological Possibilities,” 463.

infected Penda with septicemic plague using a hypodermic needle.¹⁰⁷ This was just the beginning of the biological weaponization followed during and after the Second World War.

The matter of his malingering also calls into question Holmes's method of eliciting a confession. When "The Dying Detective" was published in 1913, socioeconomic consequences of the decaying social body were being discussed that went back at least as far as the Boer War. That year, John Collie, a respected medical expert in actuarial matters, published *Malingering and Feigned Sickness*, detailing his experience detecting false compensation claims by workers for sickness and injury. Drawing on a military metaphor for industry, Collie writes, "The stricken soldier in the industrial warfare is, because of distrust, too often over-anxious, at all hazards, to guard himself against the possibility of future incapacity arising out of his disability."¹⁰⁸ Collie attributes the sickness of "the soldier in industrial warfare" not to a moral failing but to a psychological disorder caused by class warfare. What made England prosperous also produced the sickness of its laboring class, those on whom the continued prosperity of the nation depended.¹⁰⁹ Collie invokes the Holmesian gaze to diagnosis the condition when he suggests, "Never was the old instruction of 'eyes first, ears second, hands third' . . . more necessary than in dealing with these cases. The patient should be carefully watched as he undresses . . . and the light should be the best possible."¹¹⁰ He thus demonstrates the influence of detective fiction on medicine itself. Although Holmes himself is acting, his British body's performance of the kind of diseased condition of colonial and British laborers links the two by way of a weaponized bacterial

¹⁰⁷ Mukherjee, "Out-of-the-Way Asiatic Disease," 84.

¹⁰⁸ *Malingering and Feigned Sickness* (London: Edward Arnold, 1913), 10.

¹⁰⁹ Mukherjee, "Out-of-the-Way Asiatic Disease," 87.

¹¹⁰ *Malingering and Feigned Sickness*, 44.

contagion. Read in the context of Collie's medico-detective work, this nexus shows the extension of the martial metaphor from the nation and the empire to the politics and circuits of capital. Thus Holmes's malingering, though adopted for the purpose of catching a criminal who has already succeeded once in deploying an exotic tropical disease as a weapon, excites rather than allays concerns about the English race. The story, in effect, highlights both an external and internal medical war being waged in England: one by disease, and one by the system of medical discourse that pathologizes socio-economic concerns through the rhetoric of war.

In "The Adventure of the Blanched Soldier," Doyle deploys an instance of military medicine in the service of the martial metaphor. Written well into the twentieth century but taking place in 1903, just three years after the South Africa War, the story has Holmes face the medico-socio implications of the Boer War. James Dodd, an exemplary specimen of physical, military fitness, visits Holmes to learn the fate of his comrade-in-arms from that war, Godfrey Emsworth. After Holmes investigates, despite Emsworth's recalcitrant father, he reveals that Godfrey has been hiding in his family home because of what he believes to be a case of leprosy acquired in the war. Recalling Holmes's ability to read Watson as a military man in *Scarlet*, Doyle has Holmes quickly ascertain that Dodd too is a military man and served in South Africa, before Dodd can even recount his case: "When a gentleman of virile appearance enters my room with such tan upon his face as an English sun could never give, and with his handkerchief in his sleeve instead of in his pocket, it is not difficult to place him."¹¹¹ In this characterization, Holmes supplants the image of the diseased, debilitated army, weak from typhoid and decaying constitutional health, with one of vitality and fitness: he reads Dodd's military background in his virile appearance. Holmes thus rejects the central anxieties of the Boer War and the worry that empire was

¹¹¹ "The Adventure of the Blanched Soldier," in Doyle, *Sherlock Holmes: The Complete Novels and Stories*, II, 539. Hereafter cited parenthetically in the text as *BB*.

physically degrading the English race.¹¹² In this way, Dodd serves as rhetorical weapon for disavowing Britain's troubled medical history with respect to the war, a history Doyle was intimately familiar with.

The other central character, however, challenges this construction. Dodd's fitness puts him in stark contrast to Godfrey, who reveals that after being wounded in battle he took shelter in a Boer leper hospital and was infected with the disease. In the nineteenth century, leprosy was associated with the tropics and the colonies and with the savage and the pre-modern. It was a disease that physically marked the body in a degenerative fashion, through discoloration and disfigurement of the face and extremities, in addition to harkening back to the quarantine measures of biblical times. When Dodd first glimpses Godfrey's blanched face, he sees "something slinking, something furtive, something guilty, something very unlike the frank, manly lad that I had known" (*BB*, 545–46). The "slinking" and "furtive" appearance connotes the Boer's stealthy tactics, those that changed the old narrative of gentlemanly warfare.¹¹³ And this reference to the Boer influence in conjunction with the demasculinization suggests that a feminine, foreign presence has infected a prominent English family¹¹⁴—one with an upstanding genealogy of military service, no less, as Godfrey's father is a well-respected officer of the Crimean War. Read in this light, Godfrey's illness signifies the corruption of a bloodline that seemingly stood for the masculine, commanding defense of the nation.

The link between Godfrey's disappearance and the Boer War takes the form of disease, drawing a connection between British imperial war and the subsequent infection of the metropole

¹¹² Harris, "Pathological Possibilities," 463.

¹¹³ Peck, *War and Victorian Literature*, 173.

¹¹⁴ Otis, *Membranes*, 102.

and the British upper class. Once Holmes tells Godfrey's father that he is aware of Godfrey's "leprosy," the colonel grants Holmes and Dodd access to the missing soldier. Godfrey recounts his experiences in the leper hospital, showing them through a Gothic lens: "The African sun flooded through the big, curtainless windows, and every detail of the great, bare, whitewashed dormitory stood out hard and clear. In front of me was standing a small, dwarflike man with a huge, bulbous head, who was jabbering excitedly in Dutch, waving two horrible hands which looked to me like brown sponges" (*BB*, 554). Continuing the trope of deformation and degeneration—the large bulbous head recalls Culverton Smith's oversized skull—Godfrey comments on the other patients: "Not one of them was a normal human being. Every one was twisted or swollen or disfigured in some strange way" (*BB*, 554). The connection between the degenerate humanoids in the hospital and Godfrey's own corrupted body implicate war in the biological segregation of someone who had previously been a model specimen of a military man, like Dodd. It is important to recognize, however, that leprosy was not caused by the British military. It existed already in South Africa, and the circumstances of the war merely exposed Godfrey to it. Deploying the familiar trope of medicine as the ur-war, because it is the most dangerous war, the only other English patient says to Godfrey, "Man alive! You are in far greater danger here than ever you were on the battlefield. You are in the Leper Hospital, and you have slept in a leper's bed" (*BB*, 555). Here, the military blends with the sexual.

As in *Dracula*, this interaction brings the sexual ordering of society into a military context, connecting the martial metaphor, as a medical deployment of sexuality for racial purity, with its military genealogy. There are two possible agents of infection in this scene. One is the "dwarflike man" who assaults Godfrey with his "deformed hands," making contact with an open wound out of which fresh blood flows: "He had laid his deformed hands upon me and was dragging me out of bed, regardless of the fresh flow of blood from my wound" (*BB*, 554–55). The

other is the bed that the English-speaker identifies as contaminated by leper patients. In both cases, military discourse frames the infection: in the first, through the physical altercation between a foreigner and a soldier, the former making contact with the latter's combat wound; in the second, through the Godfrey's catching the disease "in bed," which links his corruption with venereal disease,¹¹⁵ a significant problem for the British military, one that led to the Contagious Disease Acts imposing military medical imperatives on civilian public health,¹¹⁶ a policy Doyle had a strong opinion on.¹¹⁷ The venereal component, moreover, contributes to the idea that Godfrey's corruption in the war also polluted a great military and socially ranked bloodline. This connotation returns to Dodd's initial hypothesis about Godfrey's disappearance, that it involved guilt and shame over his conduct in the war. Godfrey's unmanly appearance, his "guilty" and "slinking" demeanor, seem to allude to the fact that British conduct during the Boer War was not altogether "manly"¹¹⁸—that is, not up to the British military ideals of honor and progress. In both cases, microbial infection is caused by war, which on the one hand destabilizes the martial metaphor but on the other reinforces the need to defend the British social body against infections of this nature, which are linked with the biopolitical techniques birthed from military medicine and utilized to shape the health of the British race through sexuality and reproduction.

¹¹⁵ Ibid.

¹¹⁶ Of note here is the appearance of leprosy in *Dracula*. Mina's face begins to undergo visible changes associated with the vampire, and she covers it much like a "leper of the old mantle." Edmond, *Leprosy and Empire*, 135.

¹¹⁷ Doyle, Arthur Conan. "This Week: Topics of the Day." *The Medical Times and Gazette*, June 16 1883, 671-72.

¹¹⁸ Yumna Siddiqi, *Anxieties of Empire and the Fiction of Intrigue* (New York: Columbia University Press, 2008), 68.

The assemblage of Dodd, Holmes, and Holmes's medical expert reinscribes the need for the martial metaphor to reveal and fight against what ails England—biologically, socially, and now, psychologically. These characters represent the convergence of three different discourses in Doyle's work: the military, medicine, and detection. Dodd frames his questions about Godfrey's disappearance in military language, approaching the house in a "frontal attack" but running into problems when he finds that it is "so large and rambling that a regiment might be hid away in it and no one the wiser" (*BB*, 546). Dodd's military-style inquiry leads him to find a physical and possibly criminal problem with Godfrey. Consequently, he seeks out Holmes, who with his medico-forensic detection makes his own initial diagnosis and discounts the criminal hypothesis. Holmes's hypothesis is finally confirmed by a character more strictly emblematic of medical discourse, Saunders, whose special knowledge of tropical infections has a significant military and colonial history. This convergence of medicine, the military, and detection illustrates the ways these discourses become intertwined in surveillance, diagnosis, and treatment by way of the martial metaphor.

Doyle's foray into Boer War medical military fiction conveys an ambivalent position on the effects of equating medicine with war. The narrative at once empowers the martial metaphor as a narrative strategy for promoting British national interests and undercuts the viability of such a formulation. By offering an alternative etiology for Godfrey's "leprosy" and "controllable causes" for the side effects of imperialism, Holmes constructs a misreading that allows England to avoid self-toxicity; "The Blanched Soldier," however, suggests that as time passed it became more difficult for Holmes to exert this narrative control in a credible way.¹¹⁹ This shows the contradictory nature of the martial metaphor with respect to British medicine: the fact that this

¹¹⁹ Harris, "Pathological Possibilities," 463.

representation has been narratively constructed by national and military commitments. In this case, it is Doyle's documented commitment to sanitizing the British image in the light of the Boer War atrocities. Furthermore, while Godfrey's apparent leprosy seems to undercut Dodd's fitness, its psychological origin can assuage fears of biological ill health in the upper classes. Thus, the fear of bodily infection is displaced onto the mind, which becomes a future battlefield for the martial metaphor.

* * *

In his unique position as a writer, medical practitioner, and military doctor, Doyle wrote the martial metaphor into various developments of modernity both medical—bacteriology, immunology, toxicology, forensic medicine—and political—the Boer War, the Physical Committee on Degeneration, and Compulsory Vaccination. His work shows how the martial metaphor informed the medicalization of society, most prominently through linkages to detection, policing, and the ordering of the natural world—the human hierarchy over disease or the social one. The underlying connections between the military underpinnings of the martial metaphor link Doyle's imperial and military imperatives with the discourse of detection.

From Doyle's earliest Holmes fiction and medical writings to those written well into the twentieth century, it is clear that he conflated biological threats with military and political ones. Even though his early fiction doesn't invoke the martial metaphor overtly, the underlying logic of that metaphor, by way of the advent of immunology and bacteriology, is what links Doyle's medical writings with his Holmes stories. If the Holmes stories gave him a way to reflect narratively on and allay the anxieties over the colonial, the degenerate, and the microbial that were conflated with those over the political and the military, they also became a mode for him to explain the developing understanding of medicine to the lay reader, especially given his *fin de siècle* popularity. However, it was not only the fictional Watson but Doyle himself who embodied

the martial metaphor, through his stint in the Boer War. Moreover, his enthusiastic defense of the British Empire, read in the context of his medical military concerns about enteric fever and vaccination, provides a background for the appearance of bacteriological disease in “The Dying Detective” and “The Blanched Soldier.” Ultimately, Doyle’s medical writing invokes the martial metaphor in the defense of Britishness as an identity and an index of health; his fiction simultaneously upholds and undercuts this proposition in the service of British imperialism. In effect, Doyle was a prominent propagator of the martial metaphor, but read in all its contradictions his corpus puts into question the very structures and logics that “medicine is war” was deployed to sustain.

Chapter 5: Joseph Conrad on Triumphant Health, Tropical Medicine, and Magic Bullets

Introducing a historical account of malaria in ancient Greece and Rome, military surgeon and tropical medicine specialist Sir Ronald Ross writes that in the war against disease, “we must welcome every possible ally”,¹ referring in this case to the historian. As we have seen, many literary authors took up the role of allies to the physicians who were fighting the war “on the ground.” Joseph Conrad was not one of these authors.

If the contradictions in Doyle’s relationship to the martial metaphor trouble its validity as a narrative of social and medical order, then Conrad’s modernist treatment of it radically foregrounds its pathogenic and destructive character. Although the lines between health and sickness blur in Conrad’s writings, his position on the martial metaphor, unlike Doyle’s, is unequivocal in showing how Englishness is being corrupted and is weakening—the English people becoming like the primitive subjects of the colonies. He reveals how the martial metaphor contributes to the production of the deaths of colonial others.

There is no question that Conrad’s *Heart of Darkness* (1899) is plagued by the idea of sickness. With its images of dying natives and mad Europeans, the book tempts us to read it as a warning against crossing the imperial threshold, with the threat that the dark jungle kingdom is beleaguered by some primordial miasma waiting to pollute the white body of the colonial, both physically and psychologically. But this reading reinscribes Western projections of exoticism and primitivism while missing the nuances of how sickness and health function in the novella in the larger context of tropical medicine. This chapter builds on previous work on illness in *Heart of Darkness* by developing an extended reading of the novella’s construction of tropical disease and

¹ In Ross’s introduction to William Henry Jones, *Malaria, a Neglected Factor in the History of Greece and Rome* (Cambridge: Macmillan and Bowes, 1907), 14.

how that reflects the narratives of tropical medicine specialists in popular and professional publications.

Most medical readings of *Heart of Darkness* account for Kurtz's psychological maladies, notably those of Martin Bock and Charlotte Rogers. These readings tend to build on Patrick Brantlinger's reading of "the myth of the Dark continent," in which Europeans bring the light of civilization to primitives at great risk of degenerating into sub-humans themselves—"going native" or being "maddened by the tropics."² A primary focus of this kind of criticism is Kurtz' madness, which has led a number of critics to read the novel in terms of psychology and psychiatry. Martin Bock tries to reconstruct Conrad's "medical identity" in terms of pre-Freudian psychology. He suggests that the notion of "restraint" is a medical one, so that exposure to savage otherness leads to a loss of civilized restraint and then to madness.³ Charlotte Rogers also addresses the issue of madness, but she focuses on the "maddening space" of the Congo and its influence on the tale's narration.⁴

Among non-psychological readings, Bock discusses contagion and tropical medicine, addressing Conrad's experience with illness and treatments as a result of his own Congo voyage, and the debates and developments of germ theory that were contemporary with Conrad, although Bock focuses on *The Nigger of the "Narcissus"* and *The Congo Diary*. Bock argues that Conrad

² "Victorians and Africans: The Genealogy of the Myth of the Dark Continent," *Critical Inquiry* 12, no. 1 (1985): 29.

³ *Joseph Conrad and Psychological Medicine* (Lubbock: Texas Tech University Press, 2002), 87, 91.

⁴ *Jungle Fever: Exploring Madness and Medicine in Twentieth-Century Tropical Narratives* (Nashville: Vanderbilt University Press, 2012), 32.

was aware of the germ theory of disease as early as 1895,⁵ which is important to a medical reading of *Heart of Darkness* because of the text's ambiguity or vacillation between the notions of contagion and miasma, similar to their conflation in *Dracula*. Laura Otis has addressed the notion of tropical disease in *Heart of Darkness* directly, but only in passing as the topic connects to Thomas Mann's *Death in Venice*. She suggests, quoting McIntyre, that both texts use the exterior landscape to represent the inner "landscape" of their protagonists and the way they "catch a foreign disease."⁶

Instead of focusing on Kurtz's psychology, I address how embodied forms of tropical disease and health operate in the novella. Conrad uses disease to signify the effects of European imperialism and the health that sustains it. As his text reveals, health can be quite sickening. Conrad shows how this kind of pathogenic health is a function of the martial metaphor.

Heart of Darkness challenges notions of European health and even its own textual constructions of naturalized African insalubrity by implicating European colonials as pathogenic agents of what I refer to as *coloniopathy*: the physical sickness in the Congolese caused by colonialism. In line with the text's oft-cited indeterminacy, illness in the Africans both demonstrates the pathogenic effects of colonialism and reflects Western notions of Africa as an unwholesome environment. Even while Conrad critiques the morbid effects of empire, he is unable to avoid using its tropes, such as primitivism. European health, bolstered by advances in medical science, also carries a complication: on the one hand, it denotes positive resistance to lethal disease; on the other, it signifies the capacity to perform genocidal work in the colony and an immunity to the horrors of that work. It is in this tension that the novella troubles the

⁵ "Joseph Conrad and Germ Theory: Why Captain Allistoun Smiles Thoughtfully," *The Conradian* 31, no. 2 (2006): 4.

⁶ *Membranes*, 165.

deployment of tropical medicine, a sub-discipline in Western health care that had begun developing out of parasitological research in equatorial areas and which, especially among the British, was supported mainly by the military, as its central function was to protect military personnel. Not surprisingly, the practitioners and proponents of tropical medicine mythologized their work through the martial metaphor, as we saw in Ross's proclamation above.

By showing how the novella's ambiguous relationship between health and sickness bears on tropical medicine, I also contribute to the discussion of *Heart of Darkness's* problematic representations of race. Questions of whether Conrad was racist and whether his work has any merit, given its construction of natives as primitives, have occupied a number of Conrad scholars and postcolonial scholars in recent decades, such as Ian Watt, Patrick Brantlinger, Chinua Achebe, and Edward Said. My reading of coloniopathy in *Heart of Darkness* takes account of the ambiguous representation of sickness as both European and African in origin, by drawing from Said's argument that even though Conrad critiques empire, he cannot escape it as a guiding ideology for his critique. In terms of the martial metaphor, this suggests that Conrad challenges the differential production of health wrought by tropical medicine and the military infrastructure that the field developed co-constitutively; in doing so, however, he replicates some of the very tropes of primitivism on which that system relied.

This coloniopathic reading of Conrad promises three insights. First, it lays out a nuanced account of how literary genre destabilized the history of tropical medicine and its late Victorian militarized narratives in the popular and medical press. Conrad's own experiences of illness shaped his use of impressionism and modernist indeterminacy to challenge the Victorian imperial, military narratives attached to heroes of tropical medicine. He ascribed his life-long

invalidism to infections acquired in the Congo.⁷ It was his sickness, however, that made his writing possible: his correspondence makes it clear that had he not been struck by disease, he would more than likely have continued his maritime career instead. Sickness, especially his crippling gout that he attributed to tropical disease, made writing difficult, but as one of his friends notes, his recovery in the hospital gave him time to “do nothing and reflect.”⁸ This was an opportunity for him to work through how health and sickness had been and were being parceled out in the Congo. Conrad’s ironic structure and impressionistic techniques reveal how tropical medicine contributed to rather than alleviated the “Dark Continent’s” becoming “dark” and, analogously, how Africa was constructed ideologically and materially by imperialism as an inherently diseased environment,⁹ one that needed to be colonized by the civilized world with medical force. In this way, the novella shows how tropical medicine itself was pathogenic to the native populations.

Second, this chapter shows how imperialism and its military infrastructure were linked to the development of tropical medicine. Countries like Germany and Britain funded tropical medicine to gain cachet on the world stage as bearers of the light of science to the benighted Africans, and the race to publish findings fueled aggressive research. Alongside this competition, though, medical knowledge was shared through the academic and popular presses, and states cooperated in advancing the martial metaphor to portray this as an effort of the “human race” against disease, as in the development of Belgian tropical medicine with help from British

⁷ “Joseph Conrad,” Wellcome Archives. I am indebted to my colleagues and friends Kathy Hardman and Ryan Sullivan for the translation of the French letter in this file.

⁸ Ibid.

⁹ Brantlinger, “Victorians and Africans,” 193.

practitioners and institutions. The problem with this figuration, however, was who would be counted as part of the “human race,” a prominent tension in Conrad’s text.

Although tropical medicine emerged as a transnational network of cooperation and competition among European states, as Deborah Neill has suggested,¹⁰ Conrad unravels specific nodes in this network: his novella draws attention to connections between Belgium and England in terms of military medicine, showing the complicity of British tropical medicine in what was called “the Crime of the Congo,” after Arthur Conan Doyle’s work (1909) by the same name, in the form of a necropolitical technology. We often think of medicine in terms of Foucauldian biopolitics, as a technology of governance that targets populations to maximize utility. Although Foucault qualifies this as the power to “make live” while letting some die, the focus is on producing vital and resourceful populations.¹¹ But a less obvious way to think of medicine is in terms of what Achille Mbembe has called “necropolitics,” the subjection of life to the power of death, by a sovereign power in a colonial space: the “capacity to define who matters and who does not, who is disposable and who is not.”¹² In necropolitics, power lies in the ability not only to kill but to maintain life in a state of injury as a tool of labor.¹³ I suggest that tropical medicine

¹⁰ *Networks in Tropical Medicine: Internationalism, Colonialism, and the Rise of a Medical Specialty, 1890–1930* (Stanford: Stanford University Press, 2012), 21–23. Although following other scholars, I discuss the “emergence of tropical medicine” as a late nineteenth-century development, it has much earlier roots. Military tracts on the subject appear as early as the late eighteenth century, such as Benjamin Moseley’s (1792) *A Treatise on Tropical Diseases: On Military Operations; and on the Climate of the West-Indie*. It was not, however, until the “scramble for Africa” that tropical medicine became an institution.

¹¹ *Society*, 251.

¹² “Necropolitics,” 27.

¹³ *Ibid.*, 21.

enabled the conferral on the Congolese natives of this status: “living dead.”¹⁴ Understanding how the novella speaks to this necropolitical relationship between the Belgians and the Congolese enables us to see both the possibilities and the limits in Conrad’s critique of the way European health triumphed over Congolese bodies.

Third, the novella brings to the surface a particular moment in epidemiological and pharmacological history that radically changed the way medicine “fought disease.” The interventions in the Congo by European tropical medicine helped bring about Huxley’s “pharmacological torpedo” in the form of German chemist and physician Paul Ehrlich’s “magic bullet.” The epidemic of sleeping sickness (trypanosomiasis) was exacerbated by colonization and gave tropical medicine researchers a lab to develop and test the first synthetic agents for targeting disease while to a degree sparing healthy tissue. In this context, Conrad exposes a history of coloniopathic disease behind arguably the most significant medical development of the last 200 years: antimicrobial, chemotherapeutic pharmacology. This linkage calls into question the logics that shaped the heroic, martial narratives of antibiotics as a “weapon.”

In this concluding chapter, I outline the connections between tropical medicine and the mythologized, if not romanticized, constructions of its military medical heroes, such as Ronald Ross, Patrick Manson, and Thomas Heazle Park, and the explorers such as Henry Morton Stanley whom their work supported. The role these men played as imperial heroes exposes the historical connections between tropical medicine and the representations of health and sickness in the novella. This first section is primarily on the history of tropical medicine, but I include references to Conrad to foreground the topics that follow. In the second section, I show how native illness and death are produced out of European health, which I understand through Achille Mbembe’s

¹⁴ Ibid., 40.

theory of necropower. Conrad emblemizes European health in the figure of the General Manager, who is entangled with both the natives' and Kurtz's illnesses, specifically via an epidemiological event contemporary with the novella: Henry Morton Stanley's catalysis of one of the worst epidemics in African history. I conclude by linking this epidemic with the rise of modern-day drug therapies, showing how colonialism enabled the development of a militarized pharmacological discourse that frames the antibiotic relationship between humans and microbes.

The "Civilizing" Mission to Beat Down Africa's Natural Defenses

Both as a material practice and as an ideological edifice, tropical medicine was a significant factor in and result of the "scramble for Africa," an imperial drive that took Europe by storm between the 1880s and 1914, and consequently both a cause and a result of the use of the martial metaphor. But however civilizing tropical medicine was meant to be, like so many other epidemiological technologies, its history lies in military logics. Not only were the majority of its early practitioners military officers, its central purpose was to support colonization in environments that had earlier been deemed inhospitable to the European body—Africa and India most notably. The "golden age" of tropical medicine, which allowed Britain to capture scientific renown of the sort previously held by Koch and Pasteur, came mostly from military researchers. In addition to the work of Patrick Manson and Ronald Ross, there were David Bruce's discovery of the bacteria that cause brucellosis (1887) and trypanosomiasis (1905), and Charles Donovan's discovery of the cause of donovanosis (1905). Meanwhile, researchers and military physicians also developed the field by institutionalizing it, as in John Sinton's founding of the Royal Society

of Tropical Medicine and Hygiene (1907).¹⁵ The growth of the tropical clinic was nurtured by military apparatus.

While the field's technological developments and protocols did reduce the incidence of disease among colonizers, the idea of progress that it espoused also fueled the scramble. That is, bringing European medical science to Africa became the medical component of the civilizing mission, the "white man's burden." At the European conference where King Leopold II of Belgium lobbied countries to accept his absolute control over what he called the "Congo Free State," he declared that his mission was "to open to civilization the only part of our globe which it has not yet penetrated," adding that "to pierce the darkness which hangs over entire peoples is, I dare say, a crusade worthy of this century of progress."¹⁶ In reality, Leopold ruled the Congo as his private domain of resource extraction and a state of exception—the political condition under which the rule of law is suspended—with his private army, the *Force Publique*.¹⁷

A central part of the "darkness" Europeans saw as haunting the Congo, along with the rest of Africa, was the inherently diseased and medically "backward" condition they attributed to the natives. Tropical medicine was part of the civilizing remedy for this. Two of its primary focuses were sleeping sickness and malaria. While both were significant inhibitors of empire, malaria had a viable treatment in the nineteenth century, which became an attractive technology to European explorers and militaries.

¹⁵ Mark S. Bailey, "A Brief History of British Military Experiences with Infectious and Tropical Diseases," *Journal of the Royal Army Medical Corps* 159, no. 3 (2013): 155.

¹⁶ Quoted in Adam Hochschild, *King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa* (Boston: Houghton Mifflin, 1998), 44.

¹⁷ *Ibid.*, 123–24.

Quinine greatly mitigated malaria's impact on colonizers. It actually treated the disease, but it also boosted confidence in the viability of the imperial project and its "civilizing mission."¹⁸ Though its causal relationship with imperial expansion is debated by medical historians, I would characterize quinine as instrumental in expediting the scramble for Africa and as one of tropical medicine's weapons of empire; its material and ideological functions gave Europeans unrestrained access to the continent.¹⁹ This use of ideology in addition to or in place of medico-scientific developments follows Laura Otis's claims that Robert Koch's visit to East Africa to treat German malaria victims was not just to make them physically healthier but also to make German's "confident" enough to maintain the colony.²⁰ This confidence boost had a kind of placebo effect, inspiring support for colonization across Europe—especially, as we will see, in Britain and Belgium. Closely tied to quinine, the work of British researchers such as Ross and Manson garnered support for tropical medicine and its role in increasing the cultural capital of British science and expanding empire in India and Africa.²¹

¹⁸ Mbembe cites quinine as one of the technologies of empire (25). See also Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (Oxford: Oxford University Press, 1981). In relation to these, although he focuses on the American colonization of the Philippines, Warwick Anderson's landmark work *Colonial Pathologies* speaks to imperial hygiene as a tool of colonization. It is worth noting that quinine had been in use by the Peruvians, in the form of Cinchona bark, for some time before it was introduced to Europeans in the seventeenth century. After 1820, it could be extracted from the bark into its concentrated alkaloid form.

¹⁹ See Michael Worboys, "Germs, Malaria and the Invention of Mansonian Tropical Medicine: From 'Diseases in the Tropics' to 'Tropical Diseases,'" *Clio Med* 35(1996).

²⁰ *Membranes*, 33.

²¹ Haynes, *Imperial Medicine*, 7.

Conrad had personal experience with quinine. He diagnosed and treated a number of sailors with it during his maritime work.²² This history is present in both his *Congo Diary* and his novella *The Shadow Line* (1916), where it is a plot device: “I pinned my faith to it. It would save the men, the ship, break the spell by its medicinal virtue, make time of no account, the weather but a passing worry and, like a magic powder working against mysterious malefices, secure the first passage of my first command against the evil powers of calms and pestilence.”²³ The protagonist of *The Shadow Line* takes command of a new ship and finds that the quinine supply had been sold by the previous captain and replaced with inert white powder. He is thus unable to treat the deranged first mate, who believes the ship is haunted. Conrad was well aware of the drug’s power to shape the course of expeditionary endeavors outside Europe. The framing of colonization being enabled through the martial metaphor was a central narrative of tropical medicine: these specialists defused the Dark Continent’s “natural defenses” against colonialism. Men like Manson and Ross were portrayed as soldiers defending the nation by developing measures against insect-born parasites, thanks in large part to their deployment of the martial metaphor in public addresses and medical publications. Even in death, many tropical medicine specialists were framed as soldiers for their medico-scientific work. A Dr. Dutton, for instance, was eulogized this way in *The Truth of the Congo Free State*, a periodical put out by the “Federation for the [sic] Defence of Belgian Interests Abroad”:

He was one of that admirable assembly of learned men, which several European monarchs, King Leopold among them, have called upon to try and victoriously fight against the terrible diseases which ravage and depopulate Africa; the members of this Association have already done much towards finding a remedy against sleeping-sickness

²² Bock, “Germ Theory,” 7.

²³ Joseph Conrad, *The Shadow Line: A Confession* (Garden City: Doubleday, 1917), 130.

and their work is carried on so cleverly and actively that we may hope soon to be able to successfully fight against that devastating scourge.²⁴

With an identifiable literary flair,²⁵ Ross, a surgeon-major but often described as a polymath for his literary endeavors, crafted prose, poetry, and public addresses in the language of the martial metaphor. A notable example is his address to the Northumberland and Durham Medical Society in 1904, “The Battle for the Health of the Tropics.” Drawing repeatedly on the martial metaphor, which turns medicine into the ur-war of the British as a nation and of human civilization as a whole, Ross opened this with, “Gentlemen, is there anything more supremely important to men than the investigation of those great diseases which destroy them by millions? What are politics, laws and philosophies to us, compared with disease and death? The principal battle of all is the battle against disease—physical, intellectual and moral.”²⁶ He made a similar claim in a historical context, likening disease to the fall of nations, in an introduction to William H. Jones’s *Malaria, a Neglected Factor in the History of Greece and Rome* (1907):

The student of biology is often struck with the feeling that historians, when dealing with the rise and fall of nations, do not generally view the phenomena from a sufficiently high biological standpoint. . . . [T]hey seem to attach too much importance to individual rulers and soldiers, and to particular wars, policies, religions, and customs; while at the same time they make little attempt to extract the fundamental causes of national success or failure.²⁷

²⁴ “Dr. Dutton,” *The Truth on the Congo Free State*, 15 July 1905, 81.

²⁵ Emilie Taylor-Brown has identified the literary qualities of the way in which fin de siècle parasitologists promoted their images. “(Re)Constructing the Knights of Science: Parasitologists and Their Literary Imaginations,” *Journal Literature and Science* 7, no. 2 (2014): 63.

²⁶ “The Battle for Health in the Tropics,” *The Journal of Tropical Medicine and Hygiene* 7 (1904): 187.

²⁷ Jones, *Malaria, a Neglected Factor in the History of Greece and Rome*, 1.

Here, Ross makes a case for the martial metaphor in historiographical terms, suggesting that such an intervention would “help in the war which is now being conducted against the disease in many countries.”²⁸

Ross discovered the malarial vector’s life cycle in 1897; he and Manson often described themselves as fighting a battle to get the theory accepted. Together with Manson’s previous work on mosquitoes, and the discovery of the tsetse fly as the vector for sleeping sickness five years later, this led to great strides in the actual prevention of disease with mosquito nets and other hygienic protocols.²⁹ On discovering the parasite’s lifecycle in the anopheline mosquito, Ross published the following poem in his collection *In Exile, Reply – What Ails the Solitude* (1906):

This day relenting God
Hath placed within my hand
A wondrous thing; and God
Be praised. At His command,
Seeking His secret deeds
With tears and toiling breath,
I find thy cunning seeds,
O million-murdering Death.
I know this little thing
A myriad men will save.
O Death, where is thy sting?
Thy victory, O Grave?

Recalling the way Kingsley framed the martial metaphor as a way to understand God’s natural laws, Ross writes of discovering the malaria *germ*—with the word meaning both “seed” and “microbe,” a duality Conrad deploys too—in the form of the malarial plasmodium. Moreover, he challenges Death’s weaponized “sting,” alluding to the verse in Corinthians describing the futility

²⁸ *Ibid.*, 14.

²⁹ It was actually French physiologist Alphonse Laveran who discovered the plasmodium parasite itself in 1880 while working in a military hospital. He would go on to be recognized and receive a Nobel Prize five years after Ross.

of death in the face of the Christian afterlife.³⁰ In addition to its material consequences, Ross's research had tremendous ideological effects: it changed people's perception of the relationship between the white European and the tropics and of the real and perceived effects of quinine. Explorers, military troops, and biomedical researchers advanced at great risk, and the massive edifice of tropical medicine was built to protect their work.³¹

This imperial militarism recurred in Ross's 1902 Nobel Prize reception for his discovery of the malarial parasite's lifecycle, where he was described as "a hero from Africa who had been occupied in a war, not against his fellow men, but against a most insidious enemy to mankind."³² In Ross's own words in the *Journal of the Royal Army Medical Corps*, malarial fever had "withheld an entire continent from humanity—the immense and fertile tracts of Africa."³³ This echoes the mythological valence of the metaphor that Manson deployed in describing malaria as "the Cerberus that guards the African continent,"³⁴ and Leopold II's justifications when seeking the world's blessing to colonize the Congo. Tropical medicine reclaimed that continent "for humanity." The unwitting irony in Ross's statement is that the ideology and material technology that this work contributed to facilitated a "war" on the Congolese that was justified precisely by their exclusion from the rubrics of "humanity" and "mankind."

³⁰ "Where, O death, is your victory? Where, O death, is your sting?" 1 Corinthians 15:55 (NIV).

³¹ Otis, *Membranes*, 5.

³² Quoted in Emilie Taylor-Brown, "Knights of Science," 48.

³³ "Researches on Malaria," *Journal of the Royal Army Medical Corps* IV, no. 4 (1905): 451.

³⁴ "The Malaria Parasite," *Journal of the Africa Society* 7, no. 13 (1907): 227.

The discovery of the malarial parasite and its life cycle in the mosquito was significant for imperial ideology because it overturned the attribution of the disease to the climate and the land per se, as simply inhospitable to Europeans. Conrad partook in this military ethos of tropical medicine when he followed the trope of constructing Africa, specifically its coasts, in a defensive posturing that repels Europeans. The figuration of tropical disease as having “withheld” Africa is analogous to Marlow’s characterization in the novella of the miasmatic darkness that permeates the coastline as he approaches the Congo,

where the merry dance of trade goes in a still and earthy atmosphere as of an overheated catacomb; all along the formless coast bordered by dangerous surf, as if Nature herself tried to ward off intruders; in and out of rivers, streams of death, whose banks were rotting into mud, whose waters, thickened into slime, invaded the contorted mangroves that seemed to writhe at us in the extremity of an impotent despair.³⁵

The way Conrad constructs the land here follows the Victorian trope of “the white man’s grave,” where the land’s material filth breeds diseased air—“the earthy atmosphere as of an overheated catacomb.” The mangroves, which appeared frequently in descriptions of tropical rivers, also bespeak disease, as they were treated as warnings of malaria in both anticontagionist and parasitological etiologies—in the former because of their rank and decaying odor, in the latter because of their linkage to insect vectors.³⁶

³⁵ Joseph Conrad, *Heart of Darkness: Authoritative Text, Backgrounds and Contexts, Criticism* (New York: Norton, 2006), 14. Hereafter cited in the text as *HD*.

³⁶ See for instance, Chas Creighton, “Malaria,” in *The Encyclopædia Britannica: A Dictionary of Arts, Sciences, and General Literature, with New Maps and Original American Articles by Eminent Writers*, ed. W. H. DePuy (Chicago: Werner, 1895), 319. In his novella *Victory*, set in what is now Indonesia, Conrad wrote about “the low, pestilential, mangrove-lined coast” of the protagonist’s destination. Joseph Conrad, *Victory* (New York: Modern Library, 1915), xiv. Philip Manson-Bahr, Manson’s son in law, notes that Manson also makes connections between the so-called “mangrove fly” and filariasis, a parasitic roundworm spread by black flies and mosquitos in the early editions of *Manson’s Tropical Diseases*. Philip H. Manson-Bahr, *Manson’s Tropical Diseases* (New York: W. Wood & Company, 1921), 633.

In opposition to the coast's "warding off intruders," Conrad figures the entropic nature of the martial metaphor. Marlow comes across a French man-of-war anchored offshore and firing indiscriminately into the jungle:

There wasn't even a shed there, and she was shelling the bush. It appears the French had one of their wars going on thereabouts. Her ensign dropped limp like a rag; the muzzles of the long six-inch guns stuck out all over the low hull; the greasy, slimy swell swung her up lazily and let her down, swaying her thin masts. In the empty immensity of earth, sky, and water, there she was, incomprehensible, firing into a continent. Pop, would go one of the six-inch guns; a small flame would dart and vanish, a little white smoke would disappear, a tiny projectile would give a feeble screech—and nothing happened. Nothing could happen. There was a touch of insanity in the proceeding, a sense of lugubrious drollery in the sight; and it was not dissipated by somebody on board assuring me earnestly there was a camp of natives—he called them enemies!—hidden out of sight somewhere. (*HD*, 14)

This scene is often read in terms of waste and inefficiency,³⁷ and the avaricious and destructive nature of French colonialism specifically, which compounds Conrad's critique of Belgium's violent colonization of the Congo. The line about firing into the coast, in a context in which crew members "were dying of fever at a rate of three per day" (*HD*, 14), presents a failure of military-backed colonization, where the land itself fights back with disease. This is not so much a failure of the martial metaphor, though, as a reinscription: The French are fighting back against the land's pathogenesis, blindly, with weapons of war. Rather than showing the metaphor's failure, Conrad exposes the material damage that results from it. The description of the French's attack, however, their "blind firing," suggests that their response was entirely military, and missing the medical component—the work of tropical medicine specialists who could make the land habitable for them. Rather than firing blindly, tropical medicine attacked diseases precisely, by targeting

³⁷ Ian Watt, *Conrad in the Nineteenth Century* (Berkeley: University of California Press, 1979), 219; Hunt Hawkins, "Conrad's Critique of Imperialism in *Heart of Darkness*," *PMLA* 94, no. 2 (1979): 297.

their insect vectors and later the parasites within the insects themselves—leading, as I argue in the final section, to the realization of pharmaceutical torpedoes.

However, even with the targeted approach of men like Ross and Manson, the Congolese suffered medically in turn. With the growing success of tropical medicine at the end of the century, the idea that white men were constitutionally unable to withstand the pestilent heart of darkness was no longer tenable.³⁸ Climate does figure prominently in Conrad's work as a source of disease, fever, and neurasthenia in Europeans, but Conrad was quite up to date with medical discourse and the discovery of germs and parasites, a point I address in the following section. In *Heart of Darkness*, climate serves as a metonym for the place where disease-causing elements, such as parasite-bearing insect vectors, reside. With tropical medicine as their weapon, Europeans could conquer both the parasites and the continent. They could avoid the mosquito with nets and prevent infection with quinine. These material effects, coupled with the ideological reconstruction of Africa as safer for white men, did not eliminate death; instead, they shifted its target population. The insights and technologies birthed from tropical medicine did not just help the British conquer Africa and India; they also helped the Belgians conquer the Congo. Leopold took advantage of the "transnational" network of tropical medicine research to cultivate his private colony and his public image. The effect was that tropical medicine helped turn the "white man's grave" into the native Congolese's grave.

³⁸ A physician of the London School of Tropical Medicine wrote in 1898, "One time, undoubtedly, these diseases were attributed to the direct and sole agency of solar heat, just as malarial fevers were attributed to the moonshine; but now they have been inscribed deeply on the tablets of bacteriology, and certainly the demonstration that disease belongs to the domain of parasitism is the greatest advance that medical science has ever made." Sambon, L. Westenra. "Acclimatization of Europeans in Tropical Lands." *The Geographical Journal* 12, no. 6 (1898): 590.

Germes of Empire

The modernist literary devices at Conrad's disposal contributed to his critique of the imperial romance tied to tropical medicine and helped him create a contradictory image of Europe as simultaneously healthy and diseased with respect to the Congo. *Heart of Darkness* is fraught with contradiction and indeterminacy. Binaries such as light and darkness become unstable, as in the city where the Belgian Company resides: a "whited sepulture" at once light and sanitary on the outside and dark and putrid on the inside (*HD*, 9). The play between the conventional positive valences of "light"—civilization, progress, science, health, and life—and the negative ones of "darkness"—primitivism, degeneration, vacuity, disease, and death—follows the complexity of the text's narrative structure.

Contrasting Conrad's binaries with Bram Stoker's in *Dracula*, Rebecca Stott suggests that Conrad blurs the boundaries of self and other, good and evil, and sickness and health rather than framing them as binaries.³⁹ Binarism reflects the ethos of the martial metaphor, and consequently Conrad challenges this kind of division. This blurring is evident in the way Marlow's experiences and "impressions" shape the narrative structure: moments from the past are interjected into the narrative present, while his own thoughts and feelings splice together fragments of dialogue in what Ian Watt has called "delayed decoding."⁴⁰ This technique is essential to Conrad's impressionism: a style that leaves the reader with impressions from the

³⁹ Rebecca Stott, *The Fabrication of the Late-Victorian Femme Fatale: The Kiss of Death* (Houndmills: Macmillan, 1992), 143.

⁴⁰ Watt, *Conrad in the Nineteenth Century*, 270.

author or narrator and an atmosphere that is filtered through subjective sensory perceptions and embraces ambiguity and indeterminacy.⁴¹

Marlow qualifies his tale before he starts it in order to show how impressions shape his narrative: “I don’t want to bother you much with what happened to me personally, yet to understand the effect on me you ought to know how I got there, what I saw. . . . It was the farthest point of navigation and culminating point of my experience. It seemed to throw a kind of light on everything about me—and into my thoughts” (*HD*, 7). Marlow’s experience at the core of the heart of darkness, his meeting with Kurtz, reveals the significance of all that came before it because it structures the way he tells the very story after the experience. Conrad’s own story in the Congo operated analogously: it was cut short by illness, which gave him a “kind of light” to throw relief on what he saw there. The narrative that became the novella was filtered through Conrad’s individual impressions, impressions that reflected his critique of empire, and of tropical medicine just when it was rising as an institution. On an allegorical and authorial level, the revelation of death and disease as an element of the description of darkness in Africa also throws into relief the conditions that produced it, namely those of European health or “light.”

This impressionistic technique helps Conrad link colonial powers, especially the British, by way of tropical medicine, to the Belgian production of death in the Congo. Marlow’s visual impressions of the scramble for Africa reflect how Conrad assigned but also blurred the blame for colonial atrocities. On the surface, Marlow seems to hold the British Empire in higher esteem than the other European colonizers. In the Company’s office in Belgium, he sees a multicolored map “marked with all the colours of a rainbow representing the different European interests in

⁴¹ See Byrne Paul Johnson, “‘Heart of Darkness’: The Dream-Sensation and Literary Impressionism Revisited,” *The Conradian* 35, no. 2 (2010); Watt, *Conrad in the Nineteenth Century*.

Africa” and remarks that “there was a vast amount of red—good to see at any time, because one knows that some real work is done in there” (*HD*, 10). Although Marlow travels to the Belgian Congo—“the yellow”—his status as an Englishman bespeaks his reference to “the red,” representing Britain’s interest in Africa. Marlow clearly looked more favorably upon British imperialism at this point in his past. But this is undercut by his general chastisement of the imperial impetus, delivered before he recounts his story. He claims that the great men of empire were “conquerors” and “for that you only want brute force—nothing to boast of, when you have it, since strength is an accident arising from the weakness of others. . . . The conquest of the earth . . . mostly means the taking away of it from those who have a different complexion” (*HD*, 7). Marlow’s reference to “real work” in the context of this preface adds irony to his younger self’s positive affirmation of British “work” in Africa. Furthermore, “strength,” refers not just to military developments like the automatic Maxim gun, but also to the power arising from technologies of European health.⁴² This tension between Britain’s work, the Congo, and European imperialism addresses the ostensibly altruistic work of tropical medicine. Read as a network of such medicine, the map identifies the “real work” being done by the British medical enterprise, suggesting that it is a civilizing mission or some testament to progress; yet it does so ambivalently. Britain’s strength arises from the disease the empire projects onto the colonized. Yet Conrad resists the notion that these values are absolute and tied to their respective positive and negative connotations; he suggests that they are, instead, differential. This difference is

⁴² The Maxim gun is often referred to as a “central tool of empire,” along with railroads and steamships. Daniel R. Headrick, “Sleeping Sickness Epidemics and Colonial Responses in East and Central Africa, 1900–1940,” *PLoS Neglected Tropical Diseases* 8, no. 4 (2014). See Daniel R. Headrick, *The Tools of Empire*, ch. 7. H. M. Stanley used a Maxim gun in his expeditions in the 1880s. He writes that the gun would be “of valuable service in helping civilization to overcome barbarism.” Quoted in Hochschild, *King Leopold’s Ghost*, 87.

evident in the tropical medicine produced health for the colonizer, not just indifferently to the colonized but in some cases to their detriment.

The historical linkage between British tropical medicine and the Belgian Congo reveals how the enterprise functioned as a tool of necropower, as a weapon that enabled death rather than forestalling it. Before the British advancements, the continent's own power over European life hindered the potential of colonialism. King Leopold wanted to take part in the scramble for Africa but needed the knowledge and experience of British explorers and medical specialists. It is thus no coincidence that the two greatest producers of tropical medicine specialists and knowledge arose alongside Leopold: The London and Liverpool Schools of Tropical Medicine.

The Liverpool school, founded in 1899, was supported primarily by Sir Alfred Jones, a British shipping magnate. Jones had clear economic and political motives for funding the institution: he held a monopoly on commercial traffic between the Congo and Antwerp, and he was King Leopold's consul for Belgium in Liverpool.⁴³ Leopold relied on London and Liverpool for information and training for some Belgian doctors, whose primary directive was not in fact 'humanitarian' because it focused only on treating Europeans.⁴⁴ They really turned to native health only when the sleeping sickness epidemic became a threat to production and came to be discussed around the world.

In 1901 and 1903, Leopold invited members of the London School of Tropical Medicine to inspect the Congo Free State, help deal with the epidemic, and eventually to conduct drug trials for the organoarsenical atoxyl, a chemotherapeutic agent I will discuss at length with respect to pharmacological medical-war. After Ross won the 1902 Nobel Prize, Leopold invited him and

⁴³ Neill, *Networks in Tropical Medicine*, 21–22.

⁴⁴ *Ibid.*, 23.

other military physicians and scientists to Belgium to celebrate, awarding him *L'Ordre de Leopold* and donating funds to the school in addition. Letters in Ross's archive at the London School of Tropical Medicine suggest that some of Ross's friends were less than thrilled at his accepting the honor. His close friend John Holt writes, "I'm sorry to see you accept 'honors' from King Leopold. 'He' does you 'no' honor by anything he can bestow. Your work has been to save human suffering and human life. What his has been you know."⁴⁵ Nevertheless, Leopold strove to profit from his relationship with the British institution. To deploy the knowledge and technologies he had received from them, he founded the Antwerp School of Tropical Medicine, designed on the British model, in 1906, two years before he was forced to abdicate his control of the Congo.

Apart from Alfred Jones, one person in particular served as a nexus between British medicine and the Belgian colonial project. The explorer Henry Morton Stanley set up routes, infrastructure, and trading stations in the Congo Basin for Leopold in the late 1870s and the 1880s—*Heart of Darkness*'s "inner station" is the fictional correlative of Stanley Falls Station, Conrad's uppermost destination during his own expedition. In his relationship with the development of British pharmaceuticals, Stanley promoted the idea of British health with respect to the country's development of quinine and tropical medicine more generally. Admired by both the British and the Belgians, was knighted for his colonial work in 1899, the year Conrad published *Heart of Darkness* and the year the London School of Tropical Medicine was founded. Explorers like Stanley held significant interest for the public; for instance, his book *In Darkest Africa* (1890) sold more than 150 thousand copies.⁴⁶ And before his expedition for Leopold,

⁴⁵ "Material on Ross receiving the Officer de l'Order de Leopold II, Belgium in August 1906," Sir Ronald Ross Collection, London School of Tropical Medicine & Hygiene, GB 0809 Ross/162/12.

⁴⁶ See Brantlinger, "Victorians and Africans."

Stanley led his famed search for Dr. David Livingstone—whose own mid-century use of quinine had demonstrated the medicine’s efficacy, especially when used prophylactically.⁴⁷

Later in the century, Leopold and Stanley both benefitted from the specifically British hype surrounding quinine, the validation of its effectiveness, and the increase in supplies of it by the British military in the 1880s.⁴⁸ The pharmaceutical company Burroughs Wellcome and Co. even marketed a “Livingstone Medicine Chest” stocked abundantly with quinine. Stanley vigorously endorsed the British brand, urging in *The Founding of the Congo Free State* (1885), “Obtain your medicine pure and well prepared. Messrs. Burroughs and Welcome [*sic*] will equip you with tropic medicine in chest and cases. . . . They have sought the best medical advice.”⁴⁹ When Stanley went on the Emin Pasha relief expedition (1886–89), his doctor, Thomas Heazle Parke, an army surgeon with experience in tropical medicine, gave a similar testimonial, citing his treatments of Stanley, his men, and himself with the drug.⁵⁰ Parke was hailed as a hero in the medical press after his death and the publication of his journal and his *Guide to Health in Africa* (1893). One reviewer wrote that he “furnishes the standard for the career of a medical hero.”⁵¹

⁴⁷ Thomas Pakenham, *The Scramble for Africa, 1876–1912* (New York: Random House, 1991), 18.

⁴⁸ Robert Marks, *The Origins of the Modern World: Fate and Fortune in the Rise of the West* (Lanham: Rowman & Littlefield, 2007), 142. The market was previously dominated by the Dutch.

⁴⁹ Henry Morton Stanley, *The Founding of the Congo Free State: A Story of Work and Exploration*, 2 vols., vol. II (London: Samson Low, Marston, Searle, & Rivington, 1885), 327.

⁵⁰ This was an expedition to rescue a German doctor who had been appointed governor of Equatoria (now South Sudan and Uganda) and who was in danger from Mahdist forces. Stanley, still under Leopold’s employment, made a deal with Leopold that he would take the longer route up the Congo to further develop it for the king. A number of scholars suggest that the Emin Pasha relief expedition was an inspiration for Marlow and his rescue narrative. See Watt, *Conrad in the Nineteenth Century*, 142.

⁵¹ See “Parke on Health in Africa,” *London Medical Press and Circular* 108, no. 14 (1894). Parke was recognized outside medical circles and was included among the “distinguished

While Parke's journal does describe some of the drug's failures, he writes of the importance of its prophylactic use and the impression it gave of British health in the Congo: "The Belgian officers, stationed at Stanley Pool, told us that our exception from fever was most extraordinary and unusual."⁵² The health of Stanley's unit was in stark contrast to that of the Belgians, and Parke writes that it "impressed us all so strongly with the prophylactic treatment, that, so far as our stock of quinine permitted, we pursued it all through our entire expedition."⁵³ In addition to its antiparasitic effects, the drug inspired a kind of confidence that imbued British tropical medicine with the image of "triumphant health," which became an ideological catalyst for seizing charge of African land and bodies. I suggest that it is this kind of health—a material effect of the martial metaphor—that Conrad embodies in the figure of the General Manager.

Conrad's experiences in the Congo and his writing and publication of *Heart of Darkness* were thus part of a significant cultural moment when tropical medicine and imperial expansion existed in a mutually constitutive relationship for Britain and Belgium. Stanley was a significant actor in this moment. As he had become a kind of celebrity adventurer, his and Parke's subscriptions to the Burroughs-Wellcome pharmacopeia gave British tropical medicine significant cultural purchase as a technology of civilization, one that was certainly appealing to Leopold. If the Maxim gun gave Stanley and his men tactical advantage and ideological support against the native populations, British pharmaceuticals gave them both the confidence and the protection from disease they needed to develop the Congo. The analogy between weaponry and

Men and Women of the Time." G. Washington Moon, *Men and Women of the Time: A Dictionary of Contemporaries*, Thirteenth ed. (London: George Routledge and Sons, 1891), 619.

⁵² *My Personal Experiences in Equatorial Africa, as Medical Officer of the Emin Pasha Relief Expedition* (New York: Charles Scribner's Sons, 1891), 480.

⁵³ *Ibid.*

medicine highlights tropical medicine's efficacy as a tool for subjugating Congolese life to the colonizer's ability to maim, kill, and instrumentalize it. Brantlinger suggests that Stanley's work for Leopold was essentially the same as that of the Company's mercenary army, the Eldorado Exploring Expedition, in *Heart of Darkness*: "To tear treasure out of the bowels of the land was their desire, with no more moral purpose at the back of it than there is in burglars breaking into a safe" (*HD*, 30).⁵⁴ This work was supported by both the material efficacy and the idea of quinine, and by its intimate ties to the British Empire and its supporting industries. Conrad was in the midst of the imperial work of British pharmacology, alongside the work of tropical practitioners like Parke and researchers like Ross and Manson, during his time in the Congo and his time writing about it.

Heart of Darkness links this imperial zeitgeist with the perception of microbial pathogenicity. Early expanders of empire like Stanley, and their supporting medical specialists like Ross, Mason, and Parke, were seen as heroes, forgers of empire. Thus, Dr. J. L. Todd, a member of the London School of Tropical Medicine who went on the 1903 expedition sent by Leopold to inspect the Congo, wrote that "the future of imperialism lay with the microscope."⁵⁵ But Conrad's novella challenged these constructions linking the military rhetoric of tropical medicine with its imperial imperatives.

In the opening of *Heart of Darkness*, the narrator evokes the sentiments of imperial soldiers, signaling the martial rhetoric surrounding tropical medicine's part in colonial expansion. He frames the heroes of empire as knights-errant who resonate in the "great spirit of the past in

⁵⁴ For Brantlinger's analysis of the Eldorado Exploring Expedition, see "Victorians and Africans."

⁵⁵ Quoted in Margaret M. Lock and Vinh-Kim Nguyen, *An Anthropology of Biomedicine* (Chichester: Wiley-Blackwell, 2010), 153.

the lower Thames”: “The tidal current runs to and fro in its unceasing service, crowded with memories of men and ships it had borne to the rest of home or to the battles of the sea. It had known and served all the men of whom the nation is proud, from Sir Francis Drake to Sir John Franklin, knights all, titled and untitled—the great knights-errant of the sea” (*HD*, 4–5). Emilie Taylor-Brown has noted how fin-de-siècle parasitologists constructed themselves in a similar image and were viewed by the public as mythic heroes of empire⁵⁶—an ethos similar to the one *Dracula*’s Crew of Light drew on when resisting an Eastern parasite on the home front. Ross and Manson, whom Taylor-Brown discusses, and certainly Stanley and Parke, fit the model of the “knights” the narrator so admires: men who opened once-unconquerable lands to the sacred fire of civilization, the light of medical science. The narrator closes his apology for the knights of empire, in their various military iterations, who embarked from the Thames:

Captains, Admirals, the dark interlopers of the eastern trade, and the commissioned “Generals” of the East India fleets. Hunters for gold and pursuers of fame they all had gone out on that stream, bearing the sword, and often the torch, messengers of might within the land, bearers of a spark from the sacred fire. What greatness had not floated on the ebb of that river into the mystery of an unknown earth! . . . The dreams of men, the seed of commonwealths, the germs of empires. (*HD*, 5)

Conrad explicitly names the military component of colonialism, linking the “sword” with the “spark” of civilization and noting the military aspect of Britain’s control of India through the privatized East India Company. Furthermore, he links these military roles with microbial pathogens. In terms of germ theory, we see the knights of empire who emanate from the Thames—that main line of the great cesspool of empire, now heavily polluted with human waste—being linked with cholera during the mid-century. Both *germ* and *seed* denote an origin, but these knights too are germs insofar as they are pathogens of empire.

⁵⁶ “Knights of Science,” 65.

These seeds are simultaneously points of origin and microbial parasites: they grow and create, but they do so only by draining life from the native host. Martin Bock argues convincingly that Conrad's diary, letters, and fiction show his knowledge of the germ theory of disease. He cites a number of instances of Conrad using the word *seedy* to denote sickness, and links this terminology to the contemporaneous spread of germ theory in medical and popular discourse.⁵⁷ With Bock's assertion in mind, we can see how a germ functions as an origin, one that will grow into a disease for native populations, and we can see how these knight-germs of empire, like so many agents of tropical disease, are parasites.⁵⁸ In this way, the passages lead us to ask who or what exactly becomes the "cunning seed" in Ross's poem. These knights-as-parasites come to represent both material and metaphorical disease in the novel, reflecting the health and sickness that tropical medicine brought to the Congo. Disease was naturalized as part of the land and the natives, because of their "primitive," unhygienic ways and the environment's hospitability to parasites. In this opening, Conrad begins to demythologize this naturalization, which validated tropical medicine's intervention as part of the civilizing mission but ironically led to a recursive propagation of disease and a necropolitical death world for the Congolese.

⁵⁷ "Germ Theory," 1.

⁵⁸ It is possible but not likely that Conrad was referring specifically to the malaria plasmodium that Ross discovered. This research was not widely publicized until 1900, in a letter to the editor of *The Lancet*. See Ronald Ross, "The Relationship of Malaria and the Mosquito," *The Lancet* 156, no. 4010 (1900). However, even in early germ theory, germs were often characterized as *parasites* in a broader sense of the term than tropical medicine and parasitology would adopt, which included protozoa (e.g., malaria plasmodium and toxoplasmosis), helminths (e.g., hook worms), ectoparasites (e.g., ticks), and the like.

Coloniopathic Work and Necropower

In *Heart of Darkness*, as the parasitic agents consume more ivory and “eviscerate the land [and tear] treasure out of its bowels,” the native population withers from privation and tropical disease (*HD*, 30). This process shows the health of the colonizer becoming a necropolitical weapon.

Consider one of the most memorable scenes in the novella, the “grove of death”:

Black shapes crouched, lay, sat between the trees, leaning against the trunks, clinging to the earth. . . . They were dying slowly—it was very clear. They were not enemies, they were not criminals, they were nothing earthly now,—nothing but black shadows of disease and starvation lying confusedly in the greenish gloom. Brought from all the recess of the coast in all the legality of time contracts, lost in uncongenial surroundings, fed on unfamiliar food, they sickened, became inefficient, and were then allowed to crawl away and rest. . . . I began to distinguish the gleam of eyes under the trees. Then, glancing down, I saw a face near my hand. The black bones reclined at full length with one shoulder against the tree, and slowly the eyelids rose and the sunken eyes looked up at me, enormous and vacant. . . . Near the same tree two more bundles of acute angles sat with their legs drawn up. . . . [A]ll about others were scattered in every pose of contorted collapse, as in some picture of a massacre or a pestilence. (*HD*, 17)

The natives live and die as “black shadows of disease.” They are constructed by Conrad as “bare life,” biology stripped of political significance and protection. The banality of the scene documents the way death and diseased life are business as usual in the colonial space.⁵⁹ The native bodies become part of the background, even of the earth—yet remain an ethereal part of the darkness that imbues the Congo. The men Marlow sees are nearly indistinguishable from the tree that their bones or “bundles of angles” recline against. The synecdoche here is both a result of necropower and an indication of Conrad’s critique.

The fragmentation into parts, a result of “pestilence” caused by the labor conditions, also reflects the colonial project’s necropolitics, what Achille Mbembe defines as the “instrumentalization of human existence and the material destruction of human bodies,” based on

⁵⁹ Kiel J. Hume, “Time and the Dialectics of Life and Death in ‘Heart of Darkness,’” *The Conradian* 34, no. 2 (2009): 69.

a racial divide that characterizes not only the life but even the death of the natives as not human.⁶⁰ Kiel Hume, in his necropolitical reading of Conrad, describes it as one of modernism's most "sustained representations of bare life."⁶¹ For Mbembe, necropolitical spaces are those, such as the colony or the slave plantation, where people are not necessarily killed outright—although they can be at any time—but are "subjected to the conditions of life which confer upon [populations] the status of *living dead*." What makes this scene—a representative picture of the labor conditions in Leopold's Congo—readable as necropolitics is the way the natives are at once killable and "kept alive but in a state of injury."⁶² In the European view of Africa, natives were a kind of inexhaustible natural resource: they could always get more laborers from other regions, from other slave traders. The idea was that human capital, much like rubber and ivory, seemed to exist in infinite supply in this region—Stanley himself had reported on the rich supply of natural and human resources.⁶³ Conrad's construction of the natives as a bodily mass that merges with the jungle, together with his denial of agency to the natives for most of the text, contributes to this imperial ideology. By making them a part of the environment, he turns them into a dehumanized resource that can be extracted seemingly without end.

The way Conrad thinks through sickness here shows his understanding that the representation of the body was not only a way to make necropower visible in his critique, it was also a tool the colonial system used to impose necropower: the depiction of the Congolese as inhuman is the kind of logic that facilitates genocide. Even though Marlow rejects this cruel

⁶⁰ "Necropolitics," 14.

⁶¹ "Time and Dialectics," 70.

⁶² Mbembe, "Necropolitics," 40. Emphasis in the original,

⁶³ Maryinez Lyons, *The Colonial Disease: A Social History of Sleeping Sickness in Northern Zaire, 1900–1940* (Cambridge: Cambridge University Press, 1992), 12.

treatment of the natives, the presentation of his critique reflects the larger problem of racial representation and its relation to death in the Congo. The Congolese die like animals, part of the “natural” environment. But this primitivization is not a regression in time to “the very beginnings of the world,” as Marlow suggests (*HD*, 33); rather, the natives’ naturalized death is “a product of modern political design . . . an entirely cultural process.”⁶⁴ Even as Marlow denounces their treatment, his representation of the Africans in this scene and elsewhere as animals undergoing cruel treatment employs the very logic that facilitates colonial atrocities. Conrad may be denouncing the Belgians, but he is still writing his critique under the aegis of an imperialistic civilizing mission based on racial difference. As Edward Said suggests, the “non-European darkness” Conrad writes of “cannot see the non-European world *resisting* imperialism.”⁶⁵

This problem speaks to why Conrad’s text does not present us with the full scope of necropower. Though Mbembe’s necropolitics is mainly concerned with the death-producing work of colonization and war, an often-overlooked valance of the theory is the way necropower functions as a tool of both the colonizer and the colonized. An example of the latter is the martyr or suicide bomber: by assuming agency over one’s own death, one takes up a form of political agency and resistance.⁶⁶ The fact that native resistance through suicide is missing from Conrad’s novella is telling; it agrees with Said’s contention that Conrad can’t see the Congolese resisting imperialism.⁶⁷ Yet there were in fact historical accounts of natives committing suicide as a result

⁶⁴ David Sherman, *In a Strange Room: Modernism’s Corpses and Mortal Obligation* (Oxford: Oxford University Press, 2014), 16–17.

⁶⁵ *Culture and Imperialism* (New York: Knopf, 1993), 30. Emphasis in the original.

⁶⁶ Mbembe, “Necropolitics,” 36–38.

⁶⁷ Alex Houen, “Sacrificial Militancy and the Wars around Terror,” in *Terror and the Postcolonial: A Concise Companion*, ed. Elleke Boehmer and Stephen Morton (Chichester: Wiley Blackwell, 2010), 131.

of Belgian rule. For instance, Doyle writes in *The Crime of the Congo* (1909), “Suicide is not natural with [sic] African, as it is with some Oriental races. But it has come in with the other blessings of King Leopold’s rule,” citing the example of a native who hanged himself but was resuscitated.⁶⁸ A counterpoint that contributes to the construction of naturalized insalubrity in Africa is the only mention of a suicide in *Heart of Darkness*: a reference to a “Swede” who hanged himself, perhaps because “the sun” or “the country” was “too much for him” (*HD*, 15). Even Doyle’s reference to a native trying to seize necropower “from below” is fraught with racist and primitivist rhetoric. Moreover, this attempt to gain agency through death was forestalled by medical intervention. The lack of agency in death mirrors the lack of agency in native life in *Heart of Darkness*.

Conrad’s racially problematic constructions reveal themselves through his narrative and modernist techniques; Marlow’s many references to going back in time contribute to the naturalization of this necropolitical exercise. Part of the reason the natives appear as bare life is that they are constructed as existing before modern time, so before politics.⁶⁹ Thus, they lack *bios*, or political life—“human rights,” as we might, however problematically, say today.

One consequence of using primitivism to represent bare life was that it allowed Europeans to colonize under the imprimatur of evolutionary science and humanitarian aid. In the case of tropical medicine, even after the discovery of insect vectors, disease was naturalized as part of the land and people, justifying European intervention. Conrad shows us how this made tropical medicine into a necropolitical weapon. Medicine in the Congo was directed at the few Europeans who were there to “civilize,” per Leopold’s lip service to progress. In giving

⁶⁸ Arthur Conan Doyle, *The Crime of the Congo* (New York: Doubleday, 1909), 108–09.

⁶⁹ Hume, “Time and Dialectics,” 65.

Europeans a means—defense against disease—as well as a reason to penetrate the Congo, tropical medicine helped them confer a living-dead status on the natives, one that kept them “barely” alive for labor power that was inefficient but could easily be replaced when they died.

Heart of Darkness discloses the practical, logistical problems of what came to be known as the “Leopoldian” system. In contrast to the biopolitical calculus of birth rates and death rates in liberal European states, where the imperative was to make some live while letting others die, in the Belgian Congo, it was the profligate expenditure of life and death that fueled “the tendency of imperial capitalism . . . toward monumental forms of waste and inefficiency; the entire operation of managers and accountants, waystations, steamboats, agents, rifles and rivets, [was] dedicated to keeping a ‘trickle of ivory’ out of the Congo.”⁷⁰ But ultimately, there would be no bodies to extract labor from, no hosts to parasitize, without a shift in the economies of health. This turn finally came in the early twentieth century, when Leopold abdicated control of the Congo. Thus, while it might seem contradictory for the Congo to have allowed such an entropic use of labor power as appears in the grove of death, the way Africa and the natives were figured as a natural resource made this a marginal concern, one of the differential productions of health that was made thinkable and feasible by the martial metaphor.

The labor problems caused by population loss in Leopold’s necropolitical state—eight to ten million by some estimates—are connected to a shift in the imperatives occupying tropical medicine between its inception in the nineteenth century and its later developments in the mid-twentieth. The reaction to the Leopoldian system did lead to a much more African-centered public health system after his abdication. Part of this was public relations, but it did result in some

⁷⁰ Allen MacDuffie, “Joseph Conrad’s Geographies of Energy,” *ELH* 76, no. 1 (2009): 90–91.

“real advances in health policy and practice.”⁷¹ The involvement of biomedicine in empire passed through two phases in this period, as Margaret Lock and Vinh-Kim Nguyen have argued.⁷² In the “imperial” phase (before 1920), biomedicine and its associated technologies were deployed to protect settlers and soldiers and focused on fevers like malaria and sleeping sickness—the kind of imperative we see in Conrad. It wasn’t until after 1920, when the native people were recognized as an indispensable resource to colonial economics, that the focus shifted to managing the health of the local people by shaping them into viable, self-sustaining, and hygienic populations.⁷³ I would characterize this as a shift in emphasis from necropolitical to biopolitical regimes.

It is not just forced labor and overexertion that induce sickness; the “grove of death” passage suggests that Europeans actually caused disease among the native populations simply by displacing them: they were “brought from all the recess of the coast” and were “lost in uncongenial surroundings, fed on unfamiliar food” (*HD*,17). This displacement might seem less savage than forced labor and starvation, but it was just as devastating. Neill suggests that even during the sleeping sickness epidemic, most people recognized a relationship between colonial projects, military conquest, and the spread of the disease.⁷⁴ Epidemiology is largely determined by ecological setting. Africans who had historically lived around the foci of disease outbreaks existed in a “tolerant relationship” with the sleeping sickness parasite.⁷⁵ Westerners disturbed this balance when they displaced populations, introduced new carriers, and violently changed the

⁷¹ Lyons, *The Colonial Disease*, 13.

⁷² Lock and Nguyen, *An Anthropology of Biomedicine*, 148–49.

⁷³ Lock and Nguyen characterize two more phases: the nationalist phase 1960-1980s; and the non-governmental phase, 1980 to the present, *ibid.*,18.

⁷⁴ Neill, *Networks in Tropical Medicine*, 105.

⁷⁵ Lyons, *The Colonial Disease*, 47.

environment through colonial development. This suggest that the movement of people was a significant factor in the necropower-induced material pathology of the grove of death—what Marlow describes as “the work that was going on. The work!” (*HD*, 17).⁷⁶

Stanley’s expedition is the historical correlative of the colonial work that facilitates disease in Conrad’s novella. Stanley was a pathogenic agent in the Congo in a material sense: medical historians generally agree that he contributed significantly to the dispersal of sleeping sickness. When setting up Leopold’s routes in the continent and in his search for the Emin Pasha, Stanley at least exacerbated the sleeping sickness that was endemic to the western part of the continent, spreading it into the central and eastern Congo when he established trading stations, disrupting populations and ecologies.⁷⁷ Moreover, as *Heart of Darkness* so vividly illustrates, forced labor and privation produced in Leopold’s Congo the ideal conditions for sleeping sickness and other tropical diseases to move across Africa and thrive.⁷⁸

⁷⁶ His word choice and repetition are significant, as they recall not only his earlier use of the word with respect to the “real work” done by the British in Africa, but also Stanley’s memoir of his work for Leopold, the subtitle of which was: “A Story of Work and Exploration.”

⁷⁷ I do not suggest that Stanley was the sole agent of the epidemic. Nevertheless, he is consistently identified as contributing to it, much as the violent changes to the environment by colonization more generally contributed; these changes in terrain and population shaped the ecological factors for epidemics. Lyons, *The Colonial Disease*, 190; Porter, *The Greatest Benefit*, 476. See Lyons, 190; Porter, *Greatest Benefit*, 476; See also Headrick, “Sleeping Sickness Epidemics and Colonial Responses.”

⁷⁸ Nutritional deficiencies accounted for a significant portion of tropical disease (and still do). While they are pathogenic in and of themselves, they also lead to depressed immune function and a higher probability of microbial infection (Lyons, 20). Thus, even diseases that were endemic to the Congo and that the local population would normally not have succumbed to became dangers under the deprivations of Leopold’s rule. While the immune system was not fully theorized as such, many people linked normal resistance to disease with adequate nutrition. Roger Casement suggests this in his “Congo Report” when he contends that many people fell prey to disease due to privation (28). “Mr. Casement to the Marquess of Lansdowne,” in *Correspondence and Report from His Majesty’s Consul at Boma Respecting the Administration of the Independent State of the Congo. Africa. No. 1 (1904)* (London: Harrison and Sons, 1094), 28.

In stark contrast to the inhabitants of the grove of death is the General Manager, who represents the inverse relationship between health in Europeans and sickness in Africans. His most striking characteristic is his health. Marlow does not ascribe any efficacious qualities to him, “no genius for organising, for initiative or for order even. . . . He had no learning and no intelligence” (*HD*, 22). He seems to have no particular aptitude for administration, either: “His position had come to him—why? Perhaps because he was never ill. . . . He had served three terms of three years out there. . . . Because triumphant health in the general rout of constitutions is a kind of power in itself” (*HD*, 23). Physically and individually, the Manager simply has the stamina to do his job—in effect, managing the forced labor of the natives and sending other colonial agents to seize ivory. His health recalls the impression that Parke describes Stanley’s outfit making on the Belgian officers—how their exemption from sickness was “extraordinary and unusual.”⁷⁹ Reading Parke’s journal as a historical context for the Manager exposes how his health is linked to the perception of British health in the Congo. The Manager, like Stanley and his staff, has the triumphant health to do the work.

Conrad’s careful word choice in “triumphant health,” is telling in terms of necropolitics. The historical context of British tropical medicine and its complex entanglement with King Leopold and his Congo Free State demonstrate how the production of white health promoted necropower in the Congo. Michael Dillon and Andrew Neal have poignantly summarized this case as the sorting of life inherent to biopolitical work: “Making life live is essentially a lethal business.”⁸⁰ However, unlike the system that makes the general population of a state live at the expense of some who must die, in the Congo there was no calculation. Medical technology

⁷⁹ *My Personal Experiences in Equatorial Africa*, 480.

⁸⁰ “Introduction,” in *Foucault on Biopolitics, Security and War*, ed. Michael Dillon and Andrew W. Neil (New York: Palgrave, 2008), 8.

allowed the natives be put into a living-dead status. Medicine advanced European health to allow for further conquest and for the state of exception in the colony, where sovereignty could regulate life and death outside the law.⁸¹

In this context, tropical medicine specialists functioned as parasites because they enabled the parasitic relationship between the empire and the colonies. When the Manager and his uncle discuss their competitor, the rogue ivory agent Kurtz, the uncle assures him that “anything can be done in this country, I say; nobody here, you understand me *here*, can endanger your position. And why? You stand the climate—you outlast them all” (*HD*, 32, italics in original). The Manager’s ability to operate outside the law is linked with his vitality—his salubrity in a pathogenic environment. His savagery and his constitution are both functions of what is inside him. And perhaps, we are told, “there was nothing within him. . . . Once when tropical diseases had laid low almost every agent in the station he was heard to say, ‘Men who come out here should have no entrails’” (*HD*, 22). This image of there being nothing inside the Manager but dark vacuity subverts the projection of darkness onto the “savage” tropical environment by reflecting it back inside the healthy European body. As darkness is made to carry the connotation of disease, we can read the Manager’s inner darkness as a kind of contagion, the living contagion of imperialism’s pathogenic effects—a coloniopathic infection. This is the “uneasiness he inspires,” the *dis-ease*.

The Manager’s anatomical vacuity serves two functions: first, it lets him resist falling prey to tropical disease, as he has no organs to infect; second, it gives him immunity to the “natural” human response to abject stimuli: the death and disease around him, the necropolitics he practices. He has no digestive organs to produce the normal human response of nausea to the

⁸¹ Mbembe, “Necropolitics,” 13.

noxious and objectionable—he can “stomach” the savagery he commits because he has no stomach. This metaphorical lack of entrails is figured as a kind of degeneration gained through science, a trope we start to see in late nineteenth-century fiction.⁸² On the one hand, it makes him fit for survival in the Congo; on the other, it associates him with criminal and, ironically, atavistic savagery. By fitting it into the medical history of the time period, the cultural moment of tropical medicine, we can view the Manager’s health as a kind of evolution gained through medico-scientific progress, one which is also, in effect, an ethical degeneration—in other words, a truly savage product of civilization. The contradiction of the Manager’s body—its unnatural, inhuman, and pathogenic health—helps us see how health and medicine do not fall into familiar binaries in Conrad’s novella. His physical health is a moral sickness, the disease of colonial parasites; medicine, the enabling technology.

Kurtz is diametrically opposed to the Manager’s vitality. Conrad does not say what he is dying of, and I will not attempt a forensic diagnosis of a literary text. I would like to draw attention to how medicine operates in the text as a tool for controlling both life and death and as a contingency for colonial atrocity. Kurtz, like the other Belgians, would have been given medical supplies consistent with Parke’s prescription, including quinine to prevent and treat malaria.⁸³ His devotee and nurse, the Russian, has also done his best to “keep [Kurtz] alive” despite the fact that “there hasn’t been a drop of food or medicine or a mouthful of invalid food for months. [Kurtz] was shamefully abandoned” (*HD*, 58). The implication here is that medicine was being supplied,

⁸² Conrad was heavily influenced by Max Nordau’s *Degeneration* (1895). Rogers, *Jungle Fever*, 38.

⁸³ Therapeutically, even when used today in preventative treatment, chloroquine (a derivative) is taken before one departs for a location where malaria is endemic. It is then continued during the stay and for as many as four weeks after leaving.

but when or before Kurtz took ill, the vital provisions—the medical weaponry keeping tropical disease at bay—were withheld.

The way the Manager facilitates Kurtz's death speaks to how "triumphant health" works "as a kind of power." Marlow repeatedly mentions the Manager's jealousy and hatred of Kurtz, whom the Manager claims "wants to be Manager" (*HD*, 32). According to the Manager, Kurtz threatened the colonial order by resorting to native savagery. His "unsound methods" and "lack of restraint," exemplified by the display of severed heads outside his camp (57), recall the Belgian *Force Publique's* methods in the Congo, as a number of contemporaneous accounts document.⁸⁴ Their procedures for making natives meet production quotas included taking hostages, burning down villages, and hanging, rape, and mutilation; perhaps most notoriously, they required "soldiers" to return with severed hands to account for bullets used.⁸⁵ This horror is not without irony; as a mark of efficiency, it stands in direct contrast to Belgium's entropic use of native populations with respect to health and hygiene. While Kurtz's literal disease is a result of the withdrawal of medical supplies, his metaphorical diseased state, his "savagery," is caused by imperialism itself. He turned the disease of European tropical health against itself when he created competition for official colonial agents and started operating under his own imperative—which detachments of the *Force Publique* also did in remote regions, for private gain. If Kurtz is "diseased," psychologically or devolutionarily, we might think of him as a kind of autoimmune response to the larger system of empire, along the lines of Roberto Esposito's understanding of immunity and biopolitics. The figuration of Kurtz as a disease that is the result of a system attacking itself speaks to what Esposito views as the problematic conceptualization of immunity,

⁸⁴ See Doyle, *The Crime of the Congo*; Casement, "Mr. Casement to the Marquess of Lansdowne."

⁸⁵ Hochschild, *King Leopold's Ghost*, 158–66.

in both the political and biological sense—the one marked by distinguishing the self from the other in an exclusionary relationship,⁸⁶ one of the martial metaphor’s problematic effects.

In response to the Company’s allergic reaction to Kurtz’s extreme methods, the Manager withdraws from Kurtz the health that enabled him to operate without restraint. Marlow overhears the Manager and his uncle discussing “the affair”: “The climate may do away with this difficulty for you. Is he alone there?” (31). Again, climate serves as a metonym for tropical disease, as it fosters the conditions for parasites to thrive. The exchange suggests that without colonial—medical—support, Kurtz will die. Marlow listens more closely: “The ‘scoundrel’ had reported that the ‘man’ had been very ill—had recovered imperfectly . . . I heard: ‘Military post—doctor—two hundred miles—quite alone now—unavoidable delays—nine months—no news—strange rumors’” (32). The Manager’s logistical control over Kurtz’s health is supplemented by his calculation that disease will do his dirty work for him. If in the eyes of the Company, synecdochally the Manager, Kurtz is metaphorically corrupting the health of their empire, it is because “he plays the game all too well.”⁸⁷ The “rescue” the Manager organizes for him is merely a show, like many of Leopold’s initiatives, such as supporting British tropical medicine and inviting its specialists to “save” the Congolese from their “naturally” dark and diseased country.

For Conrad, the imperial imperatives of tropical medicine, the excess of life, the health of the European body, and its confluence with microbial life produce this darkness, the subjugation of colonized life to death. Imperial health produces the vacuous carapaces of modernity: hollow men, savage germs of empire. A coloniopathic reading of *Heart of Darkness* reveals that Conrad

⁸⁶ Esposito, for instance, speaks to the autoimmune response, for instance, in terms of terrorism engendered by aggressive post-9/11 military and political policies. He advocates for a non-exclusionary and communal understanding of immunity in which the self is not monolithically, allergically closed off from the other. *Immunitas*, 147.

⁸⁷ Otis, *Membranes*, 109.

himself was challenging the civilizing mission of tropical medicine during the very period when it was emerging as a tenet of empire; this extends our reading of Conrad's critique of civilization beyond madness, degeneration, and resource extraction. However, the critique itself is framed within an imperial ideology that constructs Africa as inherently insalubrious to the non-medically fortified European and represents the natives' death and disease through tropes of primitivism.

Just as medicine facilitated colonial atrocity, disease enabled the very revelation of that fact: in Conrad himself, through his sickness and its influence on the denunciation of Leopold; in the novella's treatment of the Manager's health vis-à-vis the natives' sickness; and in the case of British tropical medicine and empire. Beyond simply giving it literary representation, Conrad puts into question the very work of tropical medicine, revealing that even while militarized imperial medicine and British nationalism led the charge in the civilizing efforts of empire, through a romantic narrative of conquest by "knights" like Manson and Ross or Stanley and Parke, it was not, in fact, producing "triumphant health" for all. Instead, it was abetting the same colonial atrocities that British nationals were charging Leopold's Congo Free State with. This brings the connections between death and politics to bear on the history of tropical medicine beyond the conventional biopolitical understanding, suggesting that the political effects of tropical medicine at the fin de siècle enabled the regulation not only of life but of death—a form of necropower. Conrad's novella, like that indeterminate emblem of health the General Manager, this inspires profound unease. Like Marlow, we too are meant to "have a little fever" when we read his tale and form our own impressions (41). As Conrad suggested in a letter to publisher David Meldrum, "Perhaps true literature (when you 'get it') is something like a disease one feels in one's bones, sinews, and joints."⁸⁸

⁸⁸ Martin Bock, "Disease and Medicine," in *Joseph Conrad in Context*, ed. Alan Simmons (Cambridge: Cambridge, 2009), 130.

The Legacy of War and the Congo in Ehrlich's Magic Bullets and Modern Pharmacology

Heart of Darkness puts us in a position to understand how the deployment of the martial metaphor in its tropical capacities affected medicine as a discourse more broadly. If the concentration camps in the Boer War functioned as biopolitical laboratories of modernity, the Congo became a research laboratory much more literally. The sleeping sickness epidemic was a significant moment for the martial metaphor: it became enmeshed with the development of the pharmacological “weapons” against disease that would become the foundations of treatments that are still used today for illnesses against which medicine was once defenseless.

Huxley's dream of a pharmacological “torpedo”—a medicine that would “find its way to some particular group of living elements, and cause an explosion among them, leaving the rest untouched”⁸⁹—was realized early in the twentieth century when Paul Ehrlich, a German physician and chemist and a colleague of Metchnikoff,⁹⁰ did research on trypanosomiasis. This, in conjunction with his work on industrial dyes and staining techniques in the late 1880s and his immunological work on drug chain theory, led to the burgeoning field of “chemotherapy.” The word referred not to the cancer-related field we use it for now, but to the production of specific chemical compositions that would precisely target microbial pathogens; in Ehrlich's words, “the use of drugs to injure an invading organism without injury to the host.”⁹¹

⁸⁹ “Biological Sciences and Medicine,” 429.

⁹⁰ Metchnikoff and Ehrlich received the Nobel Prize in 1908 for discovering phagocytosis.

⁹¹ Quoted in Manfred A. Hollinger, *Introduction to Pharmacology Third Edition* (Abingdon: CRC Press, 2007), 167.

For my purposes, the significance of this development is the thinking that lay behind this kind of treatment. The pharmacological torpedo materialized as a specific compound designed to attack a specific pathogenic entity.⁹² Earlier pharmacologic treatments, like quinine,⁹³ had been researched and tested for efficacy, and even the failure of Koch's tuberculin prompted discussion of validity, research transparency, and replicability. But in the case of quinine, the mechanism of action was not fully understood, and the drug had originated in what we might call botanical therapeutics—the use of drugs from “natural,” usually alkaloid, sources that entered the Victorian pharmacopeia through anecdotal use and folk-medicine traditions. Vaccines and antitoxins, likewise, were derived from cultures and serum. Although pharmacological developments continued to be drawn from “natural” sources, Ehrlich's chemotherapy was focused on those that could be developed synthetically,⁹⁴ could be built with a target in mind, and were flexible enough to be modified. It was not just a matter of what worked, but of how and why: Ehrlich wanted to develop a biochemical foundation for pharmacology rather than engage in purely empirical experimentation.⁹⁵ However, his method, like Bernard's, was based on “experiments of

⁹² A number of medical historians argue that the concept of chemotherapy is incomplete with the adjective *specific*. John Parascandola, “The Theoretical Basis of Paul Ehrlich's Chemotherapy,” *Journal of History of Medicine* 36 (1981): 20.

⁹³ Aspirin is another good example. Synthesized in 1897 by Arthur Eichengrün and Felix Hoffmann, acetylsalicylic acid, the “first synthetic drug,” was developed from salicylic acid, which was extracted from willow bark, an herbal analgesic that had been used throughout history, as early as the Assyrians in 4000 BC. Jassem G. Mahdi, “Medicinal Potential of Willow: A Chemical Perspective of Aspirin Discovery,” *Journal of Saudi Chemical Society* 14, no. 3 (2010): 318.

⁹⁴ Parascandola, “The Theoretical Basis of Paul Ehrlich's Chemotherapy,” 20.

⁹⁵ *Ibid.*, 34.

destruction,” and he advocated firmly for experimental pharmacologists to replicate or evince pathologies in live animals rather than testing drugs in healthy animal or human tissue.⁹⁶

The logic of planning and targeting and the language of injury and weaponry framed the birth of modern therapeutic pharmacology. This birth marked a significant moment for the martial metaphor in terms of discursive parallel with the industrial militarism of the twentieth century. Although Ehrlich did envision drugs like quinine—naturally derived but not fully understood—as suitable for other kinds of infections, what he imagined was building precise weapons with precise targets from a blueprint drawn with an understanding of chemistry, physiology, and microbiology. Huxley’s “torpedo” became Ehrlich’s “magic bullet,”⁹⁷ and reinscribed the martial metaphor. Ehrlich’s contribution was to the creation of compounds that aimed at or had an “affinity” for pathogens: *Corpora non agunt nisi fixate*; “Agents work only when bound.” Together with his side-chain theory of immunology, this way of thinking about drugs and disease influenced drug-receptor theory, which is now a foundational premise not just of antibiotic pharmacology; the vast majority of the pharmacopeia from this time onward is based on understanding a drug’s mechanism of action through what it binds to.

This shows us the martial metaphor’s central place in the origins of modern pharmacology. At this nexus lie an arsenical compound and the Belgian Congo. In 1905, Ehrlich was doing research into chemotherapeutic dyes and read a paper by Henry Wolfesteran Thomas, a Canadian who had tested an arsenic-based compound known as atoxyl in live animals for the

⁹⁶ Félix Bosch and Laia Rosich, “The Contributions of Paul Ehrlich to Pharmacology: A Tribute on the Occasion of the Centenary of His Nobel Prize,” *Pharmacology* 82, no. 3 (2008): 172.

⁹⁷ Ehrlich first used the English expression in 1908 in his Harben Lectures at the Royal Institute of Public Health; he had previously used the German *Zauberkegel*. See Paul Ehrlich, *Experimental Researches on Specific Therapeutics* (London: Lewis, 1908), 107.

Liverpool School of Tropical Medicine. When the drug began to show success, it became the center of a medico-military program to control the sleeping sickness epidemic and test the drug's efficacy. Manson and Ross believed that atoxyl could be for sleeping sickness what quinine was for malaria.⁹⁸ Ross suggested that it was “the biggest thing [their] school had ever done.”

The epidemic and the experimental deployment of atoxyl thus began this transition. The testing followed strict military protocols of the cordon, using what were known as *lazarets*, prison-camp-like quarantines where natives were forcibly held if thought to have sleeping sickness, and many were forcibly tested with atoxyl. As Lyons has suggested, the inspiration for Belgium's military policy in the Congo was the work of the Liverpool School.⁹⁹

Thomas's medical trials of the drug were conducted in 1905 in Uganda and the Congo. While there was some debate among Belgian officials and tropical medicine specialists over whether they should impose the experimental atoxyl on the colonized Congolese, ultimately any native who showed the symptoms—enlarged glands—was forced to give blood and lymph samples, cordoned off in an isolation camp, and given the drug. Doctors in the Congo Free State were required to search for research subjects, under penalty of disciplinary action. The drug frequently caused violent reactions or death, and in up to thirty percent of cases blindness. The focus of the trials, however, was more on research than treatment.¹⁰⁰

This drug testing was emblematic of the network of tropical medicine, particularly the linkage between British tropical medicine and Leopold's Congo Free State. The development of the trials constituted spatial and social relationships that were typical of the colonial system, but it

⁹⁸ Lyons, *The Colonial Disease*, 109.

⁹⁹ *Ibid.*

¹⁰⁰ *Ibid.*

was also “the beginning of a new configuration of science, industry and medicine unfolding between metropole and colony, and across imperial borders.”¹⁰¹ Leopold benefited from the research insofar as it promised to ensure a future labor source and countered the campaigns against his rule that the Casement report had incited in the world press.¹⁰²

Although Ehrlich had tested atoxyl in the late nineteenth century, he had done so in a culture of trypanosomiasis in vivo. Thomas demonstrated that it worked in live animals, either by stimulating an internal immune response or by metabolizing into another agent active against the parasite.¹⁰³ Ehrlich began working with a manufacturing chemist to determine the relation of the compound’s structure to its effect, and more importantly, how they could be modified. Bertheim writes of this foundational moment of modern pharmacology that “probably for the first time . . . a biologically effective substance existed whose structure was not only known precisely but also—unlike the alkaloids—was of a simple composition and extraordinary reactivity, which permitted a wide variety of modifications.”¹⁰⁴ The drug’s very name, derived from that of the mythically toxic element arsenic, suggests a mitigation of the compound’s toxicity—its damage to healthy human tissues—implying the drug was “atoxic” or “non-toxic.” Atoxyl was in fact quite toxic and often led to blindness. Ehrlich and Bertheim, however, discovered they could modify the compound’s toxicity,¹⁰⁵ which led them to synthesize hundreds of variants in an effort

¹⁰¹ Myriam Mertens, “Chemical Compounds in the Congo: Pharmaceuticals and the ‘Crossed History’ of Public Health in Belgian Africa (Ca. 1905–1939)” (Dissertation, University of Gent, 2014), 38.

¹⁰² See Neill, *Networks in Tropical Medicine*, 104.

¹⁰³ Parascandola, “The Theoretical Basis of Paul Ehrlich’s Chemotherapy,” 31.

¹⁰⁴ S. Riethmiller, “From Atoxyl to Salvarsan: Searching for the Magic Bullet,” *Chemotherapy* 51, no. 5 (2005): 239.

¹⁰⁵ Parascandola, “The Theoretical Basis of Paul Ehrlich’s Chemotherapy,” 31.

to find the best magic bullet. Antimicrobial pharmacology from before the magic bullet theory now resembled Conrad's inefficacious French man-of-war, firing aimlessly into darkness that occluded the relationship between bacteriology, immunology, and organic chemistry.

One problem with the martial metaphor is the way it delimits other forms of thinking about medicine and disease. In the case of the Congo, the battle that was waged by tropical medicine took its main enemy to be the microbe, ignoring the natural and social—and colonial—environments in which the epidemic emerged.¹⁰⁶ A central issue with this military quarantine protocol was the surveillance and forcible containment. Suspected Congolese had blood and lymph samples forcibly drawn. Tropical medicine researchers transformed the infected Congolese into pure “receptacles of the disease”—recalling Foucault's idiom of the medical gaze—simple transporters of trypanosomiasis. By contrast, any European who showed signs was treated as a patient.¹⁰⁷ Indeed, the battle between tropical medicine specialists and the trypanosomiasis parasite took place in the Congolese bodies, leaving plenty of collateral damage in the form of blind and dead patients, without accounting for the cultural, environmental, and psychological trauma the medico-military imperative caused.

The deployment of atoxyl in the Belgian Congo was a definitive point of inflection in the European imperial project's biopolitical logic of managing life and death in the colonies. While Conrad's novella, as I have shown, speaks to the necropolitical function of tropical medicine, the use of atoxyl begins to signal the investment in colonial life by means of tropical medicine. This is not to absolve European colonizers; it simply marks the turn to a different biopolitical regime. The testing and use of atoxyl, as Lyons and others have shown, was highly problematic both for

¹⁰⁶ Neill, *Networks in Tropical Medicine*, 16, 58, 63.

¹⁰⁷ Mertens, “Chemical Compounds in the Congo: Pharmaceuticals and the ‘Crossed History’ of Public Health in Belgian Africa (Ca. 1905–1939),” 33–34.

its side effects and for its deployment within the infrastructure of the *cordon sanitaire*; however, it was the beginning of a change in policy.

It might seem curious, given the history of tropical medicine in the Congo, that there were documented debates about the ethics of imposing “care.” I suggest, following Margaret Lock and Vinh-Kim Nygunen, that this is an example of a shift that began in the twentieth century in the goals of medical care in the colonies. Around 1920, as I have said, the involvement of biomedicine in empire passed from its necropolitical “imperial” phase, with medical technologies deployed mainly to protect Europeans from local fevers, to its biopolitical phase (in a Foucauldian sense), focused on managing the health of local populations now seen as economically indispensable. The new model aimed to produce rather than negate life. In response to the scandal surrounding Leopold and the entropic, unsustainable production methods in the Congo, the colonizer began to make the colonized live.

The chemotherapeutic research into trypanosomiasis, however, had effects beyond the colony. Ehrlich’s work birthed new classes of drugs that significantly altered the course of medical and military history. In 1909, he began working with arsenic derivatives to find a synthetic compound that could target the *Treponema pallidum* of syphilis,¹⁰⁸ a disease that had been devastating armies for some time, as we saw in the chapter on Stoker. After hundreds of analogues were tested, “Preparation no. 606” proved to be an effective antisyphilitic agent. The drug was first synthesized by Bertheim in Ehrlich’s lab in 1910, tested in the Congo in 1912, and eventually marketed under the trade name Salvarsan (arsphenamine), “the arsenic that saves lives.”¹⁰⁹ In 1932, sulpha drugs derived from industrial azo dyes joined the developing antibiotic

¹⁰⁸ Parascandola, “The Theoretical Basis of Paul Ehrlich’s Chemotherapy,” 32.

¹⁰⁹ Mertens, “Chemical Compounds in the Congo: Pharmaceuticals and the ‘Crossed History’ of Public Health in Belgian Africa (Ca. 1905–1939),” 81.

pharmacopeia. Ehrlich's earliest research and MD thesis (1878) had been on histological staining, and these dyes, as I mentioned in the previous chapter, increased the visibility of microbes under the microscope during the booming decades of germ theory. The line of reasoning was that if a dye could have an affinity for, or "target," a particular type of cell while avoiding others, then a synthetic magic bullet compound for that type of cell could be derived from the dye. Ehrlich had theorized as early as 1905 that dyes could kill bacteria but—foreshadowing our own post-antibiotic era—found that protozoa quickly developed resistance to them. He turned his interest to atoxyl, which also eventually turned out to produce resistance.¹¹⁰ Salvarsan, however, became the standard treatment for syphilis and was the most widely utilized antimicrobial until 1940.¹¹¹ By World War II it was being mass produced, and at the end of the war penicillin started to displace sulpha drugs.

Ehrlich's work was well-known, and as a result chemotherapeutics and pharmacology became new points through which the public came to know the martial metaphor. That is, it was known not just in angst, fear, and defense, but in the medico-scientific weaponization of biochemistry. This was in large part due to Paul de Kruif, a Dutch-borne microbiologist and journalist who served in the U.S. military during World War One. De Kruif reinscribed the martial metaphor in the minds of early twentieth-century readers of popular science in his best-selling *Microbe Hunters* (1926), where he described the heroics of men like Koch, Ross, and Ehrlich in heavily militarized and dramatic language: "No serum or vaccine of the modern microbe hunters could come near to the beneficent slaughtering of the magic bullet, compound

¹¹⁰ Parascandola, "The Theoretical Basis of Paul Ehrlich's Chemotherapy," 35; Bosch and Rosich, "The Contributions of Paul Ehrlich to Pharmacology" 175.

¹¹¹ Lorenzo Zaffiri, Jared Gardner, and Luis H. Toledo-Pereyra, "History of Antibiotics: From Salvarsan to Cephalosporins," *Journal of Investigative Surgery* 25, no. 2 (2012): 68.

six hundred and six.”¹¹² The book is widely considered one of the most influential texts in bringing microbiological science to the public, and it is both highly romantic and unsurprisingly martial in its language,¹¹³ so it is tempting to credit it with the ringing in of the martial metaphor, especially as supplemented by his *Men Against Death* (1932), which draws from his frequent framing of microbiologists as “fighters of death.”¹¹⁴ However, a number of other medical histories focused on antimicrobial therapies, such as Boris Sokoloff’s *The Miracle Drug* (1943).¹¹⁵ While there is no doubt de Kruif and others of his time were influential and did propagate the metaphor, we have seen that mid-twentieth century authors who espoused the martial metaphor were riding the crest of a much larger and older wave, one that was just as literary as it was journalistic and even medical in its textual expression.

As we have seen, the exchange between medicine and the military was bidirectional: if medical culture received the metaphor from military applications and imperatives, then the effects of the martial metaphors on medical culture—such as the magic bullet—returned to the military in very material way. In a fitting irony for practicing medicine as war, one of the compounds produced in the development of arsenical derivatives from atoxyl was Lewisite, a lethal respiratory and vesicant chemical weapon developed in 1918 by the U.S. Army Chemical

¹¹² *The Microbe Hunters* (New York: Blue Ribbon Books, 1926), 355.

¹¹³ For instance, consider how de Kruif characterizes Ehrlich’s Latinate phrases as “battle cries” or how he describes the first animal test of Ehrlich’s Compound 606: “‘Make the injection,’ said Paul Ehrlich. And into the ear-vein of that rabbit went the clear yellow fluid of the solution of 606, for the first time to do battle with the disease of the loathsome name,” 382.

¹¹⁴ Cf. William Osler’s framing of bacterial pneumonia as “captain of the men of death.” William Osler, *The Principles and Practice of Medicine, Designed for the Use of Practitioners and Students of Medicine* (New York: D. Appleton and Company, 1901), 108.

¹¹⁵ See John E. Lesch, *The First Miracle Drugs: How the Sulfa Drugs Transformed Medicine* (Oxford; New York: Oxford University Press, 2007), 5–10.

Weapons Division and stockpiled aggressively after the First World War. Chemical warfare created a bidirectional relationship in which military medicine qua chemical weapons led to the first effective agents for “fighting cancer,” arguably the most frequent target of the martial metaphor in modern times. The first chemotherapeutic agent—as we understand the term today, one used specifically to treat cancer by killing the most rapidly replicating cells in the body—was Mustargen, derived from mustard gas.¹¹⁶ And these examples do not even mention the sordid history of biological (germ) warfare, which we can also see emerging in literature of the Victorian period, such as H. G. Wells’ “The Stolen Bacillus,” discussed briefly in the previous chapter.

By the mid-twentieth century, the work Victorian authors did to circulate the martial metaphor had been appropriated by the film industry. Salvarsan was the first widely known antimicrobial and led the martial metaphor’s pharmacological iteration to make its way into the film through the adaptation of de Kruif’s *Microbe Hunters* in *Dr. Ehrlich’s Magic Bullet*, released in 1940 by Warner Bros. Ghislain Thibault has suggested that this film and its magic bullet metaphor were linked to the sex-hygiene films of the early twentieth century, such as the 1918 *Fit to Fight*, which was developed through a cooperative effort by the U.S. military and public health officials.¹¹⁷ In this capacity, Ehrlich’s use of the metaphor was deployed by the regulatory apparatus to control female sexuality, reinscribing of the battle for racial purity that was fought on the female body in Stoker’s *Dracula*. The magic bullet and its scaffolding of modern-day antibiotic therapy carries with it the legacy of Victorian authors’ engagement with the martial metaphor.

¹¹⁶ Jie Jack Li, *Laughing Gas, Viagra, and Lipitor: The Human Stories behind the Drugs We Use* (Oxford; New York: Oxford University Press, 2006), 8.

¹¹⁷ “Needles and Bullets: Media Theory, Medicine, and Propaganda, 1910–1940,” in *Endemic: Essays in Contagion Theory*, eds. Kari Nixon and Lorenzo Servitje, 67–92. (London: Palgrave, 2016).

* * *

Although Conrad wrote *Heart of Darkness* at a significant moment in medical, imperial, and military history, and challenged the martial metaphor, he certainly did not stop it. I close this study of the martial metaphor with Conrad not out of convention—he is often used to mark the shift from the Victorian to the modernist—but because his engagement with the martial metaphor began a new era of its deployment in military, civilian, and medical discourse, especially in terms of drugs, most notably the early antibiotics. This was the moment when the martial metaphor became one of “total war,” leading to our current crisis with antibiotic resistance, arguably the most dangerous threat facing humankind as a whole.

As I have shown, the martial metaphor gained a new level of traction in the twentieth century. What Conrad shows is that although Victorian authors, through their influence and wide circulation, transfigured material military medical imperatives and histories into metaphor in their fiction and non-fiction—showing that literature was in large part responsible for inscribing the metaphor in the public imaginary—that very mode could be turned against it. We saw this in Shelley. If Romantic, late Victorian Gothic, and detective fiction aligned themselves with medico-military logics and anxieties, Conrad’s modernism gave him a venue for unraveling the muddled connections between imperialism, the military, tropical medicine, and modern pharmacology. Like his “germs of empire” and his pathogenic figure of preternatural health, the General Manager, Conrad puts into question the ethical quandaries and problematics of the moment when the West began its campaign against microbes through modern pharmacology.

Conclusion

In these chapters, I have indicated the value of this work for changing how we think about medical history and literature in Victorian studies. “Medicine is War” shows how literature not only reflected but naturalized the development of the martial metaphor, a process that obscured the metaphor’s military origins and the biopolitical work it performs in moving between fiction, the popular press, and medical discourse. In this sense, this work provides methodological tools for medical historians and literary scholars to examine the martial metaphor critically.

To close my treatment, I would like to touch on some current implications of the martial metaphor, its effects in our own moment, and how investigating its cultural history lets us not only fill a scholarly gap in Victorian studies but rethink certain aspects of bioethics and medical politics and communication. I will consider these points with respect to three medical concerns: antibiotic resistance, the 2014 Ebola pandemic, and the oft-cited “war against cancer.”

I alluded to the way the martial metaphor, through its centuries-long deployment, has been a significant player in the development of antibiotic resistance. If the martial metaphor structured the war on germs from the early twentieth century until the end of the golden age of medicine in the 1980s, then apocalypse is the current metaphor in the popular imaginary and scientific publication for articulating the failure of the total war on bacterial infections.¹ Post-humanist scholarship, the scientific investigation of the ecology of disease² and the symbiotic evolutionary relationship between humans and microbes, conceptualized as the microbiome, has

¹ B. Nerlich, “‘The Post-Antibiotic Apocalypse’ and the ‘War on Superbugs’: Catastrophe Discourse in Microbiology, Its Rhetorical Form and Political Function,” *Public Underst Sci* 18, no. 5 (2009): 575; Nina Singh et al., “How Often Are Antibiotic-Resistant Bacteria Said to ‘Evolve’ in the News?,” *PLOS ONE* 11, no. 3 (2016).

² Hannah Landecker, “Antibiotic Resistance and the Biology of History,” *Body & Society* 22, no. 4 (2015): 18.

challenged militarized theories of immunity and even the ideologies contingent upon bounded, autonomous subjectivity, especially given the continual discovery of new “mind-altering effects” of the brain-gut axis.³ As I suggested in the introduction, regarding the National Academy of Science’s Forum on Microbial Threats (2006),⁴ it seems bacterial evolution has given us no choice but to change metaphors, the hope being that we can reshape the apocalypse—perhaps to a model of balance, returning to a form of humoral logic. Given chapter one’s historization of humoral theory vis-à-vis the martial metaphor, if this were to happen, we could also appreciate and account for the cultural logics embedded in what and who is balanced, so as to not reinscribe some of the racial discourses of the early nineteenth century cholera epidemics. While the phenomenon of antibiotic resistance has implications for humankind, like so many other health issues, it also operates differentially on lines of inequality.

Many readers will be aware that we must be careful about antibiotic over-prescription and pressuring medical practitioners to “give [us] something to fight that” infection that probably isn’t bacterial, practicing a form of lay antibiotic stewardship in the age of biomedicalization. However, as recent research has shown, antibiotic resistance has a major socio-economic component. Poverty is a driving factor: sharing medications, using left-over antibiotics, and buying foreign antibiotics without a prescription have been cited as contributing to antibiotic resistance in the U.S. This problem is magnified in the context of global health, especially in

³ John F. Cryan and Timothy G. Dinan, “Mind-Altering Microorganisms: The Impact of the Gut Microbiota on Brain and Behaviour,” *National Review of Neuroscience* 13, no. 10 (2012): 701–02. For recent work on this topic in feminist science studies, see Wilson, Elizabeth A. *Gut Feminism*. Durham and London: Duke University Press, 2016.

⁴ “Ending the War Metaphor: The Changing Agenda for Unraveling the Host-Microbe Relationship: Workshop Summary” (Washington, DC, 2006).

countries such as India, Mexico, and the Philippines.⁵ Given the martial metaphor's contribution to the overuse of antibiotics and the fact that social determinants such as poverty limit access to adequate care and education, the metaphor's material effects magnify health inequalities.

Moving from bacterial to viral discourse, the 2014 Ebola pandemic showed us the redeployment of nineteenth-century colonial narratives of tropical medicine: not only the assertion of the martial metaphor in the defense of the Western world and body, but the espousal of the *cordon sanitaire* and its materialization in the seemingly still-dark-and-dangerous continent in western perceptions. The script of conflating immigrants and foreigners with diseased invasion follows the same logic as treating cholera, parasitism, and vampires as invaders from the East: Asia's cultures are associated with (H5N1) avian flu, Africa's with Ebola. And this is not even to mention the complications of heightened fears about bioterrorism post-911, which have been used to evoke nationalistic and militaristic thinking.

The martial metaphor still drives social iniquity and inequality in global public health, an effect that is often supported by the xenophobic association of foreigners with disease—and still, even today, with primitivism and degeneration. And as in *Dracula*, the metaphor continues to draw from popular culture. To cite one example, in 2014, some West African immigrants prompted a zombie-narrative response when their boat approached a nudist beach in the Canary Islands. Because of fears of Ebola, they were quarantined in the hot sun until they had tested negative, after which they were transported in the back of a dump truck. Another news story prompted fears that an Ebola victim had risen from the dead in Africa; this hoax was based on a

⁵ Margaret B. Planta, "The Role of Poverty in Antimicrobial Resistance," *The Journal of the American Board of Family Medicine* 20, no. 6 (2007); Paul E. Farmer et al., "Structural Violence and Clinical Medicine," *PLOS Medicine* 3, no. 10 (2006).

doctored image from the film *World War Z*.⁶ Like the vampire, the zombie today connotes infectious disease and degeneration, and almost always does so in the context of a military-like response.

Notably, the xenophobic and cordoned response to the 2014 Ebola outbreak from the Western public, especially in the United States, shows the continued construction of the developing world as pathogenic and a threat to the salubrity and safety of the West.⁷ Militarized “top-down quarantine” responses can foster disease as much as they delimit it, a concern that was regularly raised in the debates between contagionism and anticontagionism, as we saw in chapter two. Research into the deployment of the cordon during the 2014 Ebola epidemic in Liberia indicates that this militarization is not only ethically unjustified but often counterproductive. Just a few of its problematic effects are misinformation and fear that prompt dangerous behaviors and non-compliance, in both quarantined and non-quarantined populations; stigmatization, such as attaching labels of “Ebola people” to many who are not even infected; and the occurrence of secret burials out of fear of cremation, which actually creates greater risk of infection.⁸

The martial metaphor operates on three orders: on the aggregate population as a technology of regulatory biopolitics, on the individual body as a tool of discipline, and at the cellular level embodied as immune system as defense. Having discussed the larger, aggregate

⁶ Sarah Nelson, “Ebola Zombie ‘Risen from the Dead’ Is a Horrible Viral Hoax” http://www.huffingtonpost.co.uk/2014/10/06/ebola-zombie-risen-dead-viral-hoax_n_5937728.html

⁷ For a more extended reflection on the rhetoric of horror in Ebola, see Catherine Belling, “Dark Zones: The Ebola Body as a Configuration of Horror,” in *Endemic*, eds. Kari Nixon and Lorenzo Servitje (London: Palgrave, 2016).

⁸ See Umberto Pellecchia et al., “Social Consequences of Ebola Containment Measures in Liberia,” *PLOS ONE* 10, no. 12 (2015); Mark A. Rothstein, “The Moral Challenge of Ebola,” *American Journal of Public Health* 105, no. 1 (2015).

implications, I will now discuss individual bodies and their immune systems. In its use with terminal diseases like cancer, the martial metaphor provides a meaning-making narrative that imbues with agency what is out of the individual's control and in essence stochastic: the results of bad genes (in the case of cancer), or the chance encounter with a pathogen one doesn't have resistance to (in the extreme case of Ebola, or, more prosaically, a freshly mutated rhinovirus causing an upper respiratory infection). I don't wish to oppose or disparage the use of the martial metaphor per se; I empathize and espouse the right of individuals to make their own meanings out of their experiences with illness. And there are certainly of positive effects of the use of this and other metaphors by patients and doctors in medical narratives. Some studies have shown both increased medical compliance and knowledge acquisition from the use of a video game—"Remission 2"—in which patients "blast" enemy cancer cells. The history I have discussed in terms of biopower, especially with Kingsley, shows how a martial-medical video game could serve a disciplinary yet clearly affirmative function. Thus I don't want to deny the beneficial effects of the martial metaphor, whether in behavioral or medication-related compliance or even placebo-like improved immune response.⁹ What I do want to insist on, however, is a critical awareness of the implications its use carries: subjecting patients into failures when they succumb to disease, conceptual opposition to palliative care, and continued deployment of heroic medicine qua chemotherapy and radiation in extremis.

Recent editorials, going along with a trend in medical humanist inquiry, have made the case that the war metaphor is not universal. Many cancer patients find it an imposition to follow the cultural script of bravely fighting disease. Mary Elizabeth Williams, author of *A Series of*

⁹ Sadaf Sajjad et al., "Psychotherapy through Video Game to Target Illness Related Problematic Behaviors of Children with Brain Tumor" *Current Medical Imaging Reviews* 10(2014): 63.

Catastrophes and Miracles, describes her experience this way in a recent interview: “Whenever I hear someone say ‘I beat cancer,’ it just feels so disrespectful to others. . . It divides us into winners and losers.”¹⁰

While “Medicine is War” is a cultural study and history of the present rather than a practical or theoretical text on narrative medicine,¹¹ I suggest that it can bring Victorian studies to bear on the narratological humanistic inquiry into medical communications.¹² I have made the case that it is important, given the naturalization of the martial metaphor, to acknowledge its history, even though it works as a valuable rhetorical shorthand for understanding how medicine developed or for understanding how the immune system and medication work. In the same way, medical professionals training in narrative medicine and humanistic inquiry would be better served by not just thinking about alternative metaphors, or necessarily discouraging patients from thinking about medicine as war, but by considering the conditions that fostered this and other metaphor’s emergence. This can help them articulate the social, cultural, political, and ethical tensions that fold into our default way of approaching human morbidity and mortality. This line of inquiry opens a space for doctors and patients to ask what war allows for and delimits in terms

¹⁰ Peggy Orenstein, “Surviving Cancer Without the Positive Thinking,” *The Atlantic*, May 2016, https://www.theatlantic.com/health/archive/2016/05/surviving-cancer-without-the-positive-thinking/481764/?utm_source=atfb.

¹¹ Rita Charon, *Narrative Medicine: Honoring the Stories of Illness* (Oxford; New York: Oxford University Press, 2006). I have made similar claims about the disciplinary function of video games, in our own contemporary moment, with respect to adopting official governmental narratives in response to epidemic threats. See Lorenzo Servitje, “H5n1 for Angry Birds: *Plague Inc.*, Mobile Games, and the Biopolitics of Outbreak Narratives.” *Science Fiction Studies* 43, no. 1 (2016): 85–103.

¹² For a recent narratological reading of nineteenth-century literature and medicine that also makes a case for the relevance of Victorian literature to narrative medicine, see Erika Wright, *Reading for Health: Medical Narratives and the Nineteenth-Century Novel* (Athens, OH: Ohio University Press, 2016).

of treatment. But beyond the single patient-doctor pairing, I follow Olivia Banner's recent call to consider the medical humanities in terms of structural competency in addition to the empathic imperative—to look at the larger context in which medical interactions take place and replicate cultural norms and social inequalities.¹³ In this capacity, tracing the martial metaphor's history helps us think about the sets of relations that structure not just doctor-patient interactions but medicine as a system of thought.

¹³ "Structural Racism and Practices of Reading in the Medical Humanities," *Literature and Medicine* 34, no. 1 (2016): 26–27.

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