

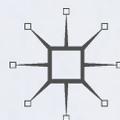
MEDICINE AND BIOMEDICAL SCIENCES IN MODERN HISTORY



# **HISTORIES OF POST-MORTEM CONTAGION**

INFECTIOUS CORPSES AND  
CONTESTED BURIALS

EDITED BY  
CHRISTOS LYNTERIS AND  
NICHOLAS H. A. EVANS



Medicine and Biomedical Sciences  
in Modern History

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The aim of this series is to illuminate the development and impact of medicine and the biomedical sciences in the modern era. The series was founded by the late Professor John Pickstone, and its ambitions reflect his commitment to the integrated study of medicine, science and technology in their contexts. He repeatedly commented that it was a pity that the foundation discipline of the field, for which he popularized the acronym 'HSTM' (History of Science, Technology and Medicine) had been the history of science rather than the history of medicine. His point was that historians of science had too often focused just on scientific ideas and institutions, while historians of medicine always had to consider the understanding, management and meanings of diseases in their socio-economic, cultural, technological and political contexts. In the event, most of the books in the series dealt with medicine and the biomedical sciences, and the changed series title reflects this. However, as the new editors we share Professor Pickstone's enthusiasm for the integrated study of medicine, science and technology, encouraging studies on biomedical science, translational medicine, clinical practice, disease histories, medical technologies, medical specialisms and health policies. The books in this series will present medicine and biomedical science as crucial features of modern culture, analysing their economic, social and political aspects, while not neglecting their expert content and context. Our authors investigate the uses and consequences of technical knowledge, and how it shaped, and was shaped by, particular economic, social and political structures. In re-launching the Series, we hope to build on its strengths but extend its geographical range beyond Western Europe and North America. *Medicine and Biomedical Sciences in Modern History* is intended to supply analysis and stimulate debate. All books are based on searching historical study of topics which are important, not least because they cut across conventional academic boundaries. They should appeal not just to historians, nor just to medical practitioners, scientists and engineers, but to all who are interested in the place of medicine and biomedical sciences in modern history.

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Christos Lynteris · Nicholas H. A. Evans  
Editors

# Histories of Post-Mortem Contagion

Infectious Corpses and Contested Burials

palgrave  
macmillan

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# Introduction: The Challenge of the Epidemic Corpse

*Christos Lynteris and Nicholas H. A. Evans*

At the turn of the new millennium, a series of natural disasters (the Turkish earthquake, the Mozambique floods, and Hurricane Mitch) led to the growth of panic over the sudden global proliferation of exposed human cadavers. Responding to this febrile atmosphere, a Pan American Health Organization (PAHO)/World Health Organization (WHO) piece in *The Lancet* urged readers to resist the popular idea ‘that dead bodies cause a major risk of disease’ and to treat it as what it is: ‘a myth’.<sup>1</sup> Titled ‘Stop Propagating Disaster Myths’, the article explained that ‘the result of this mistaken belief is the overlooked and unintended

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social effect of the precipitous and unceremonious disposal of corpses', an action of vast ethical, legal, and financial consequences.<sup>2</sup> Subsequent reviews of the literature have suggested that it is the living, not the dead, who pose the greatest epidemic risk in the wake of both natural disasters and epidemics.<sup>3</sup> Yet fifteen years later, during the Ebola epidemic in West Africa (2013–2015), the same narrative appeared once again to galvanize public opinion through medical and news reports that used sensational stories and photography to frame 'traditional African' burial as a 'culture vector' of the lethal virus.<sup>4</sup> While, given the transmission pathway of the Ebola virus, nobody would deny the epidemiological importance of the post-mortem fluids in such a situation, what was remarkable was the repeated use of a set of mythologized tropes about a corpse's danger to stigmatize and dramatize certain local practices.<sup>5</sup> Such was the force of this narrative that burial proscription and reform became an important part of public health efforts against the epidemic, in many cases causing serious suspicion and resistance among afflicted communities.

For more than two-and-a-half millennia both medical and lay accounts of epidemics have set the human corpse at the center of their attention, generating one of the most pervasive tropes and topoi of what Priscilla Wald has aptly termed 'outbreak narratives'.<sup>6</sup> As witnessed in the Ebola crisis, this has led to the near-mythic status of the 'epidemic corpse' as a locus of social danger. The contributions to this volume consider how this danger might have been variously configured throughout history. They take the epidemic corpse to be a broad term, referring to human cadavers involved in or resulting from an epidemic event, regardless of the etiological framework through which it was experienced. In both this introduction and the chapters that follow, we draw together histories of post-mortem contagion to underline the fractured and at the same time socio-culturally specific nature of its configuration. We look at *contested* epidemic corpses and burials, and explore how they become sites of debate and conflict. Sometimes, this is as a result of public health authorities banning or prescribing specific forms of funerary practice, while, at other times, mortality rates might incapacitate customary death rites. In all cases, the chapters in this volume explore situations in which burials and other forms of corpse management are catalysts for the proliferation of debate and discourse. Oftentimes, public health perspectives that prioritize survival over proper death clash with collective ideas about the afterlife as the most significant common good. While underlining the precarious state of accommodation between medical and lay valorizations of life, epidemic burials thus also become sites of social and cultural dialogue and transformation.

Understanding the epidemic corpse is, in other words, of pressing political concern. As James Fairhead shows in the postscript to this volume, there is a repetitiveness to the ‘lessons learnt’ from each new epidemic crisis. Moreover, in each repeated historical instance, the threat of the epidemic corpse is rephrased through its seeming ability to create other kinds of contagion: contagious panic, contagious social collapse, and contagious terror. This introduction will argue that the epidemic corpse thus presents the medical humanities with a serious analytical challenge. Throughout history, it has been generative of intense social debate, and yet attempts to provide a universal explanation for such moments of crisis have been dependent upon our modern reading of the corpse as bacteriologically contagious. This introduction thus suggests that, until now, we have had no sociological, anthropological, or historical way of talking about the epidemic corpse that is not already dependent upon a bacteriological reading of the latter. We suggest that moving beyond the mythologization of the epidemic corpse described at the beginning of this article will require us to confront this analytical challenge. We want to ask whether it is possible to think about the epidemic corpse both with and beyond contagion. To do so, this volume ultimately proposes a reading of epidemics as spaces of material production, and we look at the corpse as both an object and an agent whose production is in process. Doing so will enable us to think anew about the ways in which the human cadaver makes demands upon society—demands to which there is no easy response.

### THE LIMITS OF POST-MORTEM CONTAGION

Several chapters in this volume (Steere-Williams, Lynteris) focus upon epidemic corpses during the early days of bacteriology, when contagion was being refigured both in the laboratory and in the field, and the dangerous potential of human cadavers was being radically rethought. Yet even during this early period microbes alone could not claim a monopoly on discourses about contagion. As Jacob Steere-Williams shows in Chap. 4, the bacteriological discovery that infectious corpses threatened the living paralleled a Victorian fascination with another kind of body whose danger stemmed from its refusal to remain bounded: the reanimated corpse of gothic literature. Just as bacteriology never invented contagion *de novo* so too did it never entirely encompass the concept.<sup>7</sup> The human cadaver’s re-configuration was part of a growing application of the notion of contagion in broader social spheres, a practice that has only further proliferated in recent years and that continues today.

The dual meaning of ‘contagion’ in epidemics continued throughout the twentieth century. As Kristen Ostherr has shown, early public health efforts to represent the danger of epidemics saw bacterial contagion conflated with moral and ethnic ‘contamination’.<sup>8</sup> Indeed, during the early twentieth century, contagion became a major lens through which concerns about the permeability of boundaries—in particular national boundaries—came to be articulated, for the contagious nature of epidemics was never confined to their microbial agents, but equally ascribed to social practices, cultural elements, and even connections between people.<sup>9</sup> Ultimately, contagion has come to be modernity’s dominant frame for thinking about the interconnected nature of the globalized world. It has become the metanarrative for a world overloaded with connections—it is the ultimate flattened representation of our globalized world. As Bruce Magnusson and Zahi Zalloua have shown, contagion has become the descriptor of choice for ‘global terrorism, suicide bombings, poverty, immigration, global financial crises, human rights, fast food, obesity, divorce and homosexuality’.<sup>10</sup> In light of this, they ask what we should do when contagion as a metaphor exceeds its original context and ‘starts *contaminating* other discourses’?<sup>11</sup>

A more recent trend in the literature has begun to question the metaphorical nature of contagion discourses. Robert Peckham has demonstrated that in the late nineteenth-century new technologies, in particular the telegraph, came under increasing suspicion for creating another kind of social contagion: panic.<sup>12</sup> But his work has also shown how what Magnusson and Zalloua described as the ‘contamination’ of other discourses by contagion is far from metaphorical. In recent decades the notion of contagion has assumed a central role in economic thinking, in particular as related to economic crisis and stock market collapse.<sup>13</sup> In such discourses, contagion has thus come to be naturalized as a cause-effect relation *literally* underlining financial phenomena, but also urban riots, terrorism, social media, or advertising. Moreover, contagion has come to be seen as the literal end point of civilization: our imminent extinction is expected at the point we become victim to our own connectedness and ‘virality’ through the spread of a ‘killer virus’.<sup>14</sup>

Social theory has not escaped such ideas. Since its inception in the late nineteenth century, social theory has sought to capture the worlds of human interaction through their contagious aspects. The birth of bacteriology coincided with the emergence of sociology in France, and contagion was quickly adopted as a model for the social itself. The early sociologist Gabriele Tarde saw contagion as a central aspect of a

sociology that privileged neither the individual nor collective representation. Rather, he explored that which contagiously passed through social assemblages, and he ‘understood social subjects to be involuntarily associated with each other via their hypnotic absorption of the contagions of others’.<sup>15</sup> In this respect Tarde’s work initiated a much longer sociological practice, of thinking about networks through seemingly intuitive epidemiological paradigms, with their attendant ‘medical metaphors’ and ‘biological analogies’.<sup>16</sup> Tarde was not alone in basing his social theory on contagion. Both Émile Durkheim and Sigmund Freud turned to bacteriology’s newly emergent vocabulary of contagion in order to explain the way in which the sacred might enter into the realms of the profane, and thus ultimately to explanation social cohesion.<sup>17</sup> The result of this was that ‘the idea of contagion was demonstrably formative for the experience of “community” in the early years of bacteriology, when Freud and Durkheim were writing’.<sup>18</sup> Similarly, through the writings of James Frazer on magic, contagion assumed a central role in the emergence of anthropological thinking.<sup>19</sup>

Across the humanities and social sciences, as well as in popular and public culture, we have thus ended up in a situation in which contagion as an arch-descriptor is called upon to do two radically different things. On the one hand, contagion is seen as the ultimate form of the social itself—the buzzing, interconnected net of relationships through which ideas pass and culture is created. On the other hand, contagion represents the tipping point of the social, the moment at which the social is seen to collapse and break down under the strain of uncontrollable disorder. This dual function of contagion would perhaps only be a footnote to this volume were it not for the fact that academic approaches to the human cadaver over the past century have also precisely adhered to this very same dichotomy.

The notion of the corpse as being at one and the same time the social and the antithesis of the social is found extensively within early anthropological attempts to understand the paradoxical mix of desire and danger with which bodies are approached in a cross-cultural context. For the father of ethnography, Bronislaw Malinowski, this dichotomy was manifested in the ability of the dead to induce both love and fear, which led to a two-fold propensity in all human societies to, on the one hand, retain the body and thus reincorporate the person into society, and on the other hand to annihilate the body and to reject all that was gruesome about it.<sup>20</sup> Mummification and burning represent these two tendencies taken to the extremes: endocannibalism, the famous process in

which relatives force themselves against all desire to consume the flesh of the dead as a final act of love, is the ultimate form in which the two tendencies are reconciled.<sup>21</sup> At the heart of Malinowski's anthropology of death and burial is a notion of duty imposed by the dead, an idea that a demand is being made that is simultaneously desired and feared, anticipated and loathed.

This theme has been continued in comparative studies of the human corpse, which have tended to stress the idea that the power of the dead to regenerate the social is intimately linked to the capacity of the body to pollute.<sup>22</sup> An eloquent example of this idea can be found in an account of death and photography in Java by the anthropologist James Siegel.<sup>23</sup> He describes how photographs of the corpse fix the dead in a way that makes them an exemplar of proper social order. The corpse is not liable to slip up, or to give into impulse of disruptive behavior. It thus comes to represent the pinnacle of a Javanese ideal, namely, a control over the high registers of speech which allow one to speak of the world as it actually is without the fear of slipping up and impulsively blurting out low dialect. Fixed through the act of photography, this image of the corpse thus represents the perfection of the social. Such idealized images, however, also exist side by side with understandings of the corpse as contagiously dangerous. In particular, the odor of the corpse is thought to be capable of killing, for it is of such pungency that it induces in people uncontrolled and impulsive words and actions. The dangerous contagious quality of the corpse in Java, in other words, is that it quite literally destroys the social by disrupting language. The corpse is at once the attainment of the social, and its absolute destruction.

Such dual notions of promise and danger can also re-emerge in contemporary academics' own attempts to incorporate the corpse into their research. As Lukas Engelmann shows in this volume, the emerging field of biohistory has sought to re-engage the epidemic corpse as an object through which to create a new and totalizing history of bubonic plague. In this endeavor, the truth hidden within the dental pulp of plague victims offers a powerful promise: to destroy all previous history and simultaneously to create a new infallible discipline.

Other scholars have tended to emphasize one or other of these two polarities in their attempts to formulate grand analytical approaches to the human cadaver. Thomas Laqueur, in his recent monumental history *The Work of the Dead: A Cultural History of Mortal Remains*, has argued that the dead are so crucial to making and creating the social worlds that

we live in that we must constantly re-enchant their mortal remains with meaning, even if we tell ourselves rationally that such ritual activity has no meaning. Indeed, for Laqueur, ‘the dead make civilization’.<sup>24</sup> In this endeavor, Laqueur has many intellectual forebears; one need only think of Benedict Anderson’s remarks on the cenotaph in the formulation of nations as ‘imagined communities’.<sup>25</sup>

Others have been more concerned to examine how corpses play a key role in challenging the social, or particular sections of it, in a given historical context. Nowhere is the idea of the corpse as social danger clearer than in the history of colonial rule. Scholars of colonialism, for example Ann Laura Stoler, have long identified the porous boundaries of the living body as sites of colonial anxiety.<sup>26</sup> As both Steere-Williams and Lynteris show in this volume, the epidemic corpse has been seen to have induced anxiety in the British colonies by threatening the integrity of ideologies of rule and ultimately challenging the imperial project itself.<sup>27</sup>

There is, in other words, a deep analytical parallel between the way in which social theorists write about contagion and the way in which they think about the human body. It is thus unsurprising to note that ideas of contagion have underwritten sociological and anthropological analysis of the human corpse: indeed, contagion has long been the default analytical mode for describing the demands made by corpses upon the living. Modern sociology’s first comparative meditation on death, the body, and burial was Robert Hertz’s essay ‘A Contribution to the Study of the Collective Representation of Death’, which laid the foundation for much subsequent sociological thought about the dead body and burial. For Hertz, the death of an individual whose own being incarnates the social can threaten to destroy society’s own image of itself. The reason is that ‘the corpse is so powerfully contagious’.<sup>28</sup>

Our point is thus that, just as contagion has become the dominant modality through which to describe that which might simultaneously realize and destroy the social, so too has the human corpse been consistently theorized as that which both (re-)makes society/civilization, while also threatening the social with destruction. As contagion became modernity’s dominant mode of thinking about the dangerous permeabilities of social boundaries, it is not surprising that it was invoked as a way of thinking about the boundary separating the dead from the living. We must thus face the fact that the analytical challenges of thinking about contagion have, through a complex historical process, become one and the same as the analytical problems we face when thinking about the human cadaver.

It is with the epidemic corpse, however, that we might most fully appreciate the complexity of this analytical situation. What happens when our reading of the social power of the epidemic corpse becomes dependent upon our bacteriological understanding of its contagious danger? This is not to deny that in the modern world the social dangers of the epidemic corpse are produced out of its biological reading. Our point is rather subtler—we want to draw attention to the manner in which theories that try to describe the universal dangers of the corpse are constructed out of a reading of the corpse that is itself historically produced and socially specific. The chapters in this volume thus aim to recapture the specific kinds of danger and promise produced by epidemic corpses in various settings. In analyses that range from the Black Death in the fourteenth century (Rollo-Koster) to twenty-first-century Ebola (Fairhead), our contributors ask how we might define the epidemic corpse and what its role might be in specific cultural settings. They explore how the epidemic corpse is approached by different individuals or social groups and how debates erupt over its proper care. They examine what comprises a ritually, hygienically, juridically, or politically proper ‘epidemic burial’, and they question who controls the means to this burial’s realization. Beneath all these concerns are broader questions of risk, blame, and responsibility: the handling of the dead is always also a moral question.

Attending to the ways in which the epidemic cadaver has been variously understood as dangerous, potent, and desirous might help us to also rethink the broader foundations of a social theory that has always fallen back upon contagion in order to capture the power of the corpse. Ultimately, we argue that this focus upon the epidemic corpse might show that our generalized theories of contagion are no longer able to illuminate the connections and disjunctures that they were originally intended to highlight. Indeed, falling back on a language of contagion might actually signal a generalized failure of description and an inability to describe with precision the nature of connections.<sup>29</sup> This volume asks how we might rethink ‘post-mortem contagion’ as a way of recapturing the dynamic relation between the corpse and society.

### THE EPIDEMIC CORPSE IN HISTORY

If we want to re-think contagion then there is perhaps no better way to do so than to ask how the epidemic corpse might be seen as transformative in the absence of contagion. How, we might ask, could we start to

grasp the debates and contestations that surrounded corpses when contagion was an entirely absent concern? Is there a way to think about the power of the epidemic corpse to engender debate without falling back into a presentist and universalist reading of its ‘contagion’? One way of thinking about this is presented to us by one of the first and most influential accounts of epidemic corpses in the Western canon. Perhaps no other description of an epidemic has influenced the way we perceive and dramatize such events more than Thucydides’ history of the so-called plague of Athens. Copied, ventriloquized, commented upon, and re-imagined in hundreds of texts, paintings, movies, and photographs, it is the first and perhaps most iconic description of an epidemic disease as a natural phenomenon. In his magnificent prose, Thucydides is explicit about the infectious nature of the disease when he describes the Athenians forbidding house visits to sick friends and relatives, as citizens ‘dropped, filled like diseased sheep, with infection communicated by their attendance of each other’.<sup>30</sup> He is also clear about the infectious peril posed by human cadavers, in so far as animals and birds of prey avoided them, perishing as they did the moment they tasted them. But such ‘epidemiological’ information is secondary to the key commentary the ‘father of history’ provides around the epidemic corpse. As the unnamed disease struck in the second year of the Peloponnesian War (430 BCE), Athens was gripped in a ‘wild disorder’ of mass mortality: with people staggering to their death in the streets of the city, human cadavers lay one upon the other ‘and half-dead corpses were seen tumbling over each other’.<sup>31</sup> The ‘plague’ led to a total ‘neglect alike of sacred and social duties’ and to the violation of even the most basic burial rites.<sup>32</sup> ‘Men buried [others] just where and how they could’, while many, Thucydides notes in a harsh turn of phrase, turned to shameless means for disposing their friends:

For some, resorting to funeral piles which were raised for others, would, before they were completed, lay their own corpses thereupon, and set them on fire. Others, when a corpse was burning, would toss upon the pyre another, which they had brought with them, and go their way.<sup>33</sup>

It is important to note that this description of the pestilence, which marks the pinnacle of Thucydides’ ‘enargic’ force—that is, his ability to bring the reader into the scene of his narrative—ushered in a much wider picture of societal collapse.<sup>34</sup> In light of imminent death, widespread

disregard for law and custom (*anomia*) and the public display of indulgence, which in the Athenian democracy had hitherto remained private matters, led the city to be gripped by the rule of transitory pleasure. The violation of funerary rites was thus tied, as a moral and political event, with an instantaneous anthropological transformation of Athenian society as a whole into an anomic condition. In short, Thucydides tells us, 'whatever any person thought pleasurable, or such as might in any way contribute thereto, that became with him both the honourable and useful'.<sup>35</sup> It is no accident that the story of the plague immediately follows the moral and political apex of Thucydides' *History*, the 'funeral solemnity' that was Pericles' Epitaph.<sup>36</sup> For here, as Clifford Orwin has stressed, lies the key to the narrative: an ethical inversion, a swift turn from the very definition of the polis as a domain of virtue, in Pericles' oration, to the suspension of society itself, not in terms of a Hobbesian levelling or equalization nor, however, in the sense of some bodily or bestial overcoming or defiling of the human spirit, but instead as a state beyond the fear of death and the hope of survival where what is good and what is useful become indistinct.<sup>37</sup>

The point here is not to underline the obvious: that Thucydides' pestilential drama has become the prototype for depicting and imagining social disintegration under the bane of 'plague', be it in Boccaccio's account of the Black Death or today's pandemic spectacles such as *The Walking Dead*. What needs to be stressed instead is the particular role of the human cadaver in this pandemic imaginary. Dramaturgically speaking, in Thucydides, the corpse is transformed from a mere platform on which political men like Pericles may reflect on the virtues of democracy (as they also build their political careers) to both a witness and silent chorus of societal tragedy. Through its horrifying, unequivocal presence in the theatre of pestilence, the epidemic corpse provides a mute but powerful commentary. This is not based upon ideas of communicability or contagion, but rather builds upon the way in which the exposed corpse forces reflection upon an unspeakable truth about humanity: that it is always on the brink of political ontological collapse.

Thucydides provides a model for thinking about the epidemic corpse as a key source of truth about the societies burying it, incinerating it, dumping it, hiding it, sanctifying, legislating or preaching on it in a time of crisis. In this sense, epidemic corpses carry with them an ethical and political potential that surpasses the category of dead human matter with which the social sciences and humanities are largely more familiar: the

polluting corpse. It is indeed easy, and in many ways theoretically comforting, to think of the epidemic corpse as polluting; in other words, as, to quote Mary Douglas, ‘matter out of place’.<sup>38</sup> Yet such language is dependent for its descriptive power upon our ideas of contagion, even if, as Douglas explains, it is describing practices that are not guided by bacteriology. The important point is that before the biomedical and epidemiological turn of the late nineteenth century, even when contamination was observed or noted (as was the case in Thucydides) it rarely played a leading role in the ethical and political agency of the epidemic corpse.<sup>39</sup> Contagion could be present, recognized, and noted, but it did not lend dramatic power to the crises precipitated by the epidemic corpse.

Other complex ways of ‘processing’ the epidemic corpse and its demands, beyond both contagion and the classical social order/anomy dichotomy, can be found throughout Western history. Take the case of Nicolas Poussin’s *The Plague of Ashdod* (c.1630) as an example. Central to this early modern painting is the image of a man risking his life in averting an infant from its dead mother’s breast as one of its siblings lies dead next to her. The man is holding his hand over his nose, a gesture repeated by another prominent figure in the painting, who seems to be stopping his son from approaching the aforementioned scene. Both visual tropes appear to stress the contaminating nature of the disease and of the human cadaver in particular, insofar as they depict modes of protection from pestilential odors, presumably emanating from the victim. Yet, though present, contagion is not the central dramaturgical faculty of the epidemic corpse in this painting. As Sheila Barker has noted, the painting fixed plague symptoms onto the bodies of the deceased, and yet the prominence of these tropes had nothing to do with any intention by Poussin to highlight or problematize ‘contagion’. Instead, Barker has claimed, their intended operation was to bring about an empathy-inducing assimilation.

Key to the experience of plague in Renaissance Europe was the notion that ‘the imagination merely frightened by the plague is enough to bring on the disease’.<sup>40</sup> Such concerns about the pathogenic, fear-inducing imagination of plague were endorsed by authorities like the seventeenth-century polymath Athanasius Kircher, and were intricately linked to humoral and Paracelsian understandings of the human body. In this regard, Poussin’s painting, executed and presented in the midst of a series of devastating plague epidemics in Italy, figured epidemic corpses so as to combine horror and beauty in an explosive mix, while retaining

a carefully crafted distance between the scene and the spectator—a well-attested tactic by the painter. Through the employment of a ‘perspectival cityscape setting’, clearly identified at the time with a Baroque theatre stage, the ontological distance between viewer and the ‘tragic characters’ depicted in the painting guaranteed the protection of the former as regards the pathogenic effects of imagining plague.<sup>41</sup> Seen as a visual tragedy, the aim of Poussin’s painting may then be said to be no less than a cathartic effect on the viewer, understood in its literal, therapeutic (i.e. Aristotelian) sense as a process of mimetic purging. ‘Poussin’s painting redirects’, Barker claims, ‘feelings of fear and pity onto a work of art structured according to the poetics of tragedy, so that ensuing tragic catharsis can provide an artificial—and harmless—outlet for these emotions’.<sup>42</sup> Poussin thus transferred earlier narrative-based therapeutic poetics, as for example present in Boccaccio’s *Decameron*, into painting in the form of a medico-visual technique. He placed the epidemic corpse at the epicenter of his composition, and therefore forged nothing less than a ‘visual prophylactic against the harmful effects of the emotions, particularly the terror and pity his contemporaries were experiencing as a result of the plague in Italy’.<sup>43</sup> In this sense, the visual epidemic corpse became part of a technique for averting plague, in a very material, humoral sense of the term within Renaissance medical frameworks.

### THE CORPSE AS AN EPISTEMIC THING

Contagion or contamination, though intelligible categories, were not central to the experience or representation of epidemic corpses until the dawn of the nineteenth century. Thereafter, however, they assumed a key role, transforming the epidemic corpse into a shifting locus of disease transmission. Rather than simply seeing this as an automatic result of the mere force of global epidemics at the time (such as the early nineteenth-century cholera pandemics) this transformation needs to be accounted for within a much broader reframing of the dead body as an epistemic thing.

The configuration of the corpse as an epidemiologically intelligible and actionable category coincided with and depended on a broader process of re-interpreting human cadavers as evidence in the course of the nineteenth century. Only in its interaction and entanglement with other scientifically inflected corpses did the epidemic corpse acquire its epistemic and political status as an agent of contagion whose knowledge and control was of urgent importance to modern societies.

Lying between the emergent disciplines of anthropology, archaeology, medicine, phrenology, forensics, and criminology, the evidentialization of the human corpse was fueled by an earlier epistemic shift described by Michel Foucault with regard to clinical practices.<sup>44</sup> By means of a novel, symptom-centered gaze, the human corpse had become ‘a privileged site for understanding and knowing the living’.<sup>45</sup> In a study of these medico-juridical processes, the anthropologist Zoe Crossland follows Carlo Ginzburg in claiming that this new status of the human corpse was part of the ‘emergence of an “evidential paradigm” which had at its heart the reading of seemingly insignificant signs and clues in the construction of narratives about the otherwise unobservable’.<sup>46</sup> She consequently isolates four key evidential stabilizations of the human corpse, through which it became capable of providing proof about: the ‘interior states and faculties’ of the human organism; individual identity; personal, social, ethnic, and national histories; and criminal activity.<sup>47</sup> In these areas, the corpse ‘testified truthfully’ in a way that the living body, with all its cunning and intentionality, could not.<sup>48</sup>

Crossland thus follows an analytical trajectory pioneered by visual scholars like Roland Barthes and Allan Sekula, anthropologists like Michael Taussig, and historians of science like Lorraine Daston and Peter Gallison, so as to argue that, within the epistemic context of mechanical objectivity, the human corpse shared a semiotic field with visual technologies like photography. From this perspective, the human corpse becomes at once iconic and indexical. It thus allows us to ‘stare unblinking, at an image of another person, which has this magical capacity to be simultaneously like the person and physically linked to the person’.<sup>49</sup>

What if, however, the human corpse could be best understood as a gateway not so much to what is invisible but to the more ambiguous category of the ‘unseen’, or what lies ‘at the edge of sight’?<sup>50</sup> In other words, following Robert Merton, into a zone of ‘unspecified ignorance’ where not knowing exactly what one does not know about the human cadaver forms the bases of the latter’s ‘operational potential’.<sup>51</sup> This approach, we would like to argue, can lead us away from the ‘linguistic’ confines of Crossland’s Peircean ‘sign-object’ reading of the human cadaver. In other words, what if we think of the cadaver as possessing a destabilizing rather than stabilizing agency?

One way of approaching such a theory is to take inspiration from Hans-Jörg Rheinberger and see the human cadaver as an emerging *epistemic thing* within a series of experimental systems.<sup>52</sup> What we mean by this is

a view of the human corpse not as something which produces certainty or truth, but as something which generates doubt, scientific concern, and debate. To see the human cadaver as an epistemic thing is thus to uphold a processual approach. This recognizes that anatomy was no longer the single producer of truth about the corpse. Instead, the corpse was produced through its immersion within multiple experimental systems across different disciplines. Here it was caught ‘between the material and conceptual aspects of science’, and transformed not simply into an evidence-bearing object, but into an open-ended, unanticipated material entity whose agency was inseparable from the ‘contained excess’ that allowed it to assume contingent operations across diverse epistemic fields.<sup>53</sup>

What this perspective enables is for us to avoid universalist and presentist readings of the ‘truth’ of the corpse. As already shown, anthropological and historical accounts of the dead often attempt to impart a universal aspect to the ability of the human dead to speak truth or to demand responses. In such cases, the agency of the corpse is linked to panhuman beliefs regarding the ‘dead [...] speaking from beyond the grave’, or, following Bruno Latour, to the trans-historical ability of corpses ‘to object’.<sup>54</sup> By contrast, assuming a processual approach forces us to realize that the ‘truth’ the corpse speaks to society—so often conceptualized as central to its ability to generate debates, create dissent, and engender transformations—is produced within and across different epistemic fields.

Perhaps most importantly, however, this helps us to appreciate how the emergence of post-mortem contagion as the dominant analytical trope for thinking about cadavers and epidemic corpses was complicated, entangled and non-linear. The nineteenth century emergence of the ‘contagious corpse’, in other words, was not a unidirectional historical process—a triumph of bacteriology—but rather a slow unwrapping at the intersections of multiple ways of telling and contesting truth about the dead body.

In the course of the nineteenth century, the epidemic corpse and its disposal came to be re-centered around notions of infection and contagion, but these were not stabilized. Rather, the corpse maintained a precarious yet fecund position between an epidemiological reasoning centered on living spaces and everyday social habits (what has traditionally been called ‘sanitarianism’) and an epidemiological reasoning focused on the transmission of diseases between humans as well as between human and non-human animals (what was broadly known as

‘contagionism’).<sup>55</sup> Neither discourse wholly produced a modern reading of ‘post-mortem’ contagion. Rather, both helped to institute it, with the corpse acting as a constant and yet destabilizing object at the center of their discourses.

By the middle of the nineteenth century, well before the discovery of individual pathogens, infection and contagion (as defined by the different epistemic frameworks in use) had already assumed a central role in the problematization of epidemic corpses. To further explore this and its consequences, it is worth looking at the example of plague science in the decades preceding the bacteriological discovery of the bubonic plague bacterium, *Yersinia pestis*.

The first case is that of an epidemic of ‘Mahamari’ in the 1870s in British India. This disease, believed by contemporaries to be a form of ‘true plague’, was observed in the Himalayan districts of Kumaun and Garhwal, where it attracted considerable attention among colonial doctors. Most important to the present argument, however, was the fact that the disposal of epidemic corpses was seen as a key element in the spread of this disease. A prevalent colonial idea held that epidemics were characterized by a tendency to force native subjects to ‘deviate’ from their customary—and incidentally hygienic—practices of cremation.<sup>56</sup> Instead, ‘the pestilential dead’ of diseases such as cholera were buried in shallow trenches, where people would aim to minimize any handling of the corpse, and thus simply cover it up in haste.<sup>57</sup> Mahamari, however, was said to have inspired even greater terror. A colonial report states that this ‘fear masters all other feelings, and the body is abandoned unburied to be eventually drawn in portions about the village site by animals and birds’.<sup>58</sup> Rather than contributing to a narrative about social collapse, however, the well-trodden image of the ritually neglected and animal-devoured epidemic corpse became part of a crucial epidemiological question about the ability of plague to maintain itself in a specific location across time. Indeed, for the colonial observers of this situation, the scattering of human cadavers by animals was seen as a necessary condition for the dormant continuation of the disease in the locality in such a way that it was ‘ever ready to affect persons suitably prepared, by any cause producing a low or bad state of health’.<sup>59</sup> As a consequence of this contingent contagionism, the image of the abandoned epidemic corpse contributed to a broader epidemiological problematization of native forms of living, which were summarily grouped together as ‘any cause’ in the above etiological formula.

In this way, in debates about plague, the epidemic corpse functioned as a bridge between diverse sanitary and contagionist schools of disease etiology; a function that it fulfilled not only synchronically, as in the case of Mahamari, but also diachronically. An example of the latter is evident in the role played by this type of corpse in shifting frameworks regarding the popular nineteenth-century idea that Egypt was the source of bubonic plague. This thesis was first clearly elaborated in the aftermath of the Napoleonic Wars and the Egyptian Campaign by Étienne Pariset. In his acclaimed treatise on the causes of plague published in 1837, Pariset argued that Egypt was the world's most important reservoir of plague.<sup>60</sup> This was supposedly due to frequent inundations of the soil leading to a proliferation of corpse putrefaction, which in his eyes were the source of the disease. Reframing historical observations by authors like Ambroise Paré and entwining them with contemporary evidence of the disease in the region, Pariset's thesis traced a history of corpse-disposal in Egypt, moving from Pharaonic mummification (and its supposedly plague-preventative faculties) to the ritual rupture brought about by Christianity.<sup>61</sup> He blamed the burial customs introduced by this new religion for the eruption of plague in Pelusium, which was the inaugural outbreak of the first plague pandemic, also known as the Justinianic plague. With Egypt supposedly 'sinking' even further in civilizational terms with the introduction of Islam and the Arab and Turkish conquests, Pariset argued that plague became endemic by means of the stabilization of unhygienic burial customs unfit for the waterlogged environment of the Nile Delta. For Pariset, the problematization of the infectious corpse was a key element in a civilizational vision of the spread and conquest of epidemic disease, a vision closely tied to sanitary 'outbreak narratives' at the time. Copied, endorsed, and contested by authors across Europe and in Egypt itself, Pariset's thesis was not in any way sanitary by default, but was malleably capable of fitting into other etiological frameworks. Hence, fifty years later it was redeployed in the writings of Charles Creighton, who in his authoritative *History of Epidemics in Great Britain* (1891) linked corpse-based plague endemicity in Egypt with the mercantile spread of the disease by means of infected soil and its 'emanations' in order to explain the spread of Black Death in the British Isles.<sup>62</sup> In particular, Creighton put emphasis on the question of the 'corruption of the unburied dead or of the imperfectly unburied dead' so as to explain the 'diffusive power' of the Black Death through the dual disease ontology of plague as both a 'cadaveric poison' and a 'soil-poison'. 'Thus,' he wrote,

if we conclude on the evidence that the bubo-plague is a soil-poison having a special affinity to the products of cadaveric decomposition, we shall understand why the Black Death, when it came to England, found so congenial a soil in the monasteries, and in the homes of the clergy.<sup>63</sup>

Indeed, retrospective epidemiological readings of historical accounts played an important role in fostering the image of the human cadaver's contagiousness. The most iconic case regards the rediscovery of the Genoese notary Gabriele de' Mussi's description of the 1346 siege of Caffa as the origin of the Black Death; a historical narrative describing the Tatars catapulting plague-infected (and supposedly infectious) corpses into the besieged Crimean citadel.<sup>64</sup> The appeal of this story was the result of its inclusion in a popular mid-nineteenth-century book on epidemics: J. F. C. Hecker's *The Epidemics of the Middle Ages* (1859).<sup>65</sup> This powerful image was able to communicate to broad audiences the supposedly contagious nature of human corpses in an unparalleled way, such that it features to this day in almost every popular account of the Black Death.

Rather than seeing the triumph of bacteriology at the turn of the nineteenth century as determining the corpse's re-configuration around notions of infection and contagion, we need to recognize the dynamic relation between different regimes of epidemiological knowledge (including historical, ethnographic, visual, and statistical) as the epistemic milieu within which the corpse assumed its contagious significance. Bacteriology, as previously discussed, never achieved a monopoly on configuring post-mortem contagion.

## NEW APPROACHES TO THE EPIDEMIC CORPSE

An abiding feature of Western analytical approaches to death and burial has been the attempt to capture the universal aspects of biological process through their moments of cultural specificity. Nowhere is this more evident than in attempts to theorize the demands made upon society by the epidemic corpse, and in our continued recourse to contagion as a promising yet problematic analytical framework. As this introduction has shown, attempts to ascribe universality to the power of the corpse can lead to an inability to grasp the specificities through which the human cadaver can become a very precise source of both social relations and tensions.

How, then, might we rethink our analytical relationship to the epidemic corpse, and what does it mean to speak of post-mortem contagion

as something that has a history? One approach is that we begin to view epidemics as moments of material production. As a number of our contributors show (Cohn, Oliver, Lynteris), epidemics cannot just be seen through the lens of destruction and death; they must also be understood as moments of creation. To think of epidemics as moments of material production is thus to ask how the production of biological matter (corpses) can demand a social, political, and medical response. The sudden and always unforeseen proliferation of bodily matter in the time of epidemics disrupts rituals of life and pollution and imposes itself upon the body politic. Indeed, if we begin to define epidemics through the lens of production, then we might begin to think anew about the way in which the cadaver makes a demand upon society, and about the way in which this demand has no easy response.

Such an approach corresponds with a growing body of literature that analyzes the corpse as a process. Whether concerned with their aesthetic, ritual, ethical, or political significance, scholars from across disciplines have in recent years moved beyond a narrow focus on the symbolic and metaphoric aspects of corpses and burials. Allowing for the dialogue of technological and material culture perspectives (of long-standing interest to archaeologists) with more performative ones, this scholarship has led to what we may call (to paraphrase the title of a special issue of *Techniques & Culture*) approaches of the ‘cadaver in process’.<sup>66</sup> Focusing on ‘what makes a corpse a corpse’, in the words of Jeff Snyder-Reinke such approaches help us see that ‘corpses [do] not just exist, but [are] *made* through the investment of considerable labor and care by interested parties’.<sup>67</sup> This corpus of work has thus strengthened and diversified perspectives on the continuous interaction between the living and human remains, well beyond their disposal, in what following Jieun Kim we may call a realm of ‘necrosocial innovations and practices’.<sup>68</sup> Thinking about the corpse-in-process allows us to account for what other authors have identified as the agency of the human cadaver without falling back into corporeal essentialisms.<sup>69</sup>

At the same time, by focusing on the epidemic as the process through which the corpse is made, we can begin to think beyond social science’s universalizing tendencies to reduce the human cadaver to either the totality of the social, or the collapse of the social. The epidemic corpse stands as a necessary object through which the humanities must pass in order to properly conceptualize the human cadaver more generally. The epidemic corpse exposes social science’s reliance upon contagion as

a descriptor of social life, and makes us aware of dichotomous reasonings that have been applied to the human body. Moreover, the epidemic corpse embodies the uncontrolled materiality of all bodies; it forces us to attend to bodies as matter in progress and material in process. It makes us rethink epidemics not just as moments of social collapse and destruction, but as moments of unparalleled creation and production.

### THE CHAPTERS OF THIS VOLUME

The chapters in this book follow a broadly chronological narrative, beginning with the most infamous of all epidemics: the Black Death. From accounts of Europe's medieval plague, we are used to thinking of contested epidemic burials as those of the poor and the marginal. In Chap. 1, however, Joëlle Rollo-Koster asks whether the most important burial in Christendom, that of Pope Clement VI, may have been influenced and altered by the recent memory of the Black Death. Rollo-Koster raises crucial questions for our historical study of post-mortem contagion: to what extent can we use sources that make no mention of epidemics or infection in order to probe the manner in which bodies might be seen as dangerous and potent?

In Chap. 2, Samuel Cohn provides a comprehensive historical comparison of riots resulting from epidemics of cholera and plague in the nineteenth and twentieth centuries. Through an examination of the role of contested epidemic burials in these civil disturbances, Cohn argues that we need to pay closer attention to the divergences between reactions to plague and cholera. His chapter stresses that while plague riots as responses to colonial excess in India in particular united different social sections and classes, cholera riots, specifically in Europe, were preceded by and fostered social division. Although epidemic burials played a key role in both processes, Cohn thus demonstrates the importance of focusing on social and class-related processes in order to disentangle the former's historical significance on the ground.

It was not only in the form of popular protests that epidemics could challenge government rule in the late nineteenth and early twentieth centuries. In Chap. 3, Jacob Steere-Williams examines a devastating typhoid fever epidemic among British troops in the South African War (1899–1902) and in particular the way in which the typhoid corpse impacted the military campaign not only by its sheer number but also by challenging one of the cornerstones of British military culture: its

notions of masculinity. Entangling this discussion with a broader understanding of how ‘the contagiousness of the dying body of the sick was extended to the abject body of the corpse’, Steere-Williams shows how the latter played a key role in a critique of the British Empire and imperialism as a whole.

Steere-Williams’ chapter thus highlights how processes of post-mortem contagion could turn the body of the coloniser into a threatening liability for the Imperial project as a whole. His chapter focuses on bodies that were named, known, and embedded within networks of pre-defined social relations. Yet this raises another question: how did colonial authorities react when epidemic corpses turned up, unannounced, free of networks or kin, and unmoored from their social setting? Christos Lynteris, in Chap. 4, explores such a situation in turn of the nineteenth century Hong Kong, where a sudden proliferation of unclaimed plague corpses dumped in public created a crisis of responsibility and blame. Lynteris shows that body dumping was not just a practice of local resistance, but that it created complex alliances and antipathies between Chinese elites and British colonials. The unclaimed body ultimately forced a question of what was responsible for this crisis—native ‘culture’, or a repressive colonial regime?

Situated in a different context of conflict, this time of a global scale, Michael Budd’s chapter undertakes a comparative analysis of the visual depictions of corpses resulting from World War I and the influenza pandemic of 1918. Examining the material and symbolic composition and decomposition of remembered corpses, Budd thus contrasts the intensive remembrance of war cadavers to the striking oblivion of epidemic corpses produced in the same historical timeframe.

Building upon themes already encountered in Samuel Cohn’s chapter, Lizzie Oliver, in Chap. 6, expands upon the idea that epidemics can create social bonds through the idea of ‘communities of contagion’. Examining cholera outbreaks in prisoner of war camps along the Burmese Railway in World War II, Oliver explores not only how these communities arose, but also their crucial role in the continued remembrance of captivity for future generations. Indeed, turning expectations on their head, Oliver demonstrates how in dire circumstances hope could come in the form of diseased bodies.

The above chapters each examine a particular historical configuration surrounding the human cadaver: they each look at how epidemic corpses were understood, interpreted, and argued over in a particular time and place. By contrast, the final chapter in this volume by Lukas Engelmann asks what these same corpses might mean for us in the present. In recent

years, human remains contained in ‘plague pits’—mass graves for the victims of the Black Death and subsequent plague epidemics—have been utilized for a new paradigm of genetic analysis that promises to rewrite the history of bubonic plague. In Chap. 7, Englemann asks whether this new engagement with the epidemic corpse is in danger of slipping into a biological presentism in which plague is reduced to a single object that exists throughout time and across space. Arriving at a historiographical impasse over this issue, he suggests that we need a new approach to bio-history, one in which the scientific history of plague is pursued in such a way that it is always informed by a history of that plague science.

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## NOTES

1. Claude de Ville de Goyet, ‘Stop Propagating Disaster Myths’. *The Lancet* 356:9231 (26 August 2000): 762–764, p. 762.
2. *Ibid.*
3. Oliver Morgan, ‘Infectious Disease Risks from Dead Bodies Following Natural Disasters’. *Revista Panamericana De Salud Publica = Pan American Journal of Public Health* 15:5 (May 2004): 307–312. Benjamin Beit-Hallahmi, ‘Fear of the Dead, Fear of Death: Is It Biological or Psychological?’ *Mortality* 17:4 (November 2012): 322–337.
4. Paul Richards, *Ebola: How a People’s Science Helped End an Epidemic* (London: Zed Books, 2016).
5. On this topic see also John Erik Troyer, ‘Technologies of the HIV/AIDS Corpse’. *Medical Anthropology: Cross-Cultural Studies in Health and Illness* 29:2 (2010): 129–149.
6. Priscilla Wald, *Contagious: Cultures, Carriers, and the Outbreak Narrative* (Durham: Duke University Press, 2008).
7. One only needs to think of the diachronic function of the story of Antigone offering funerary rites to the exposed corpse of her rebellious and defeated brother Polynices; it is no accident that Sophocles’ play is frequently found among books blacklisted by dictatorships across the globe, and even in liberal democracies it can cause considerable unease when used as commentary about the treatment of our own ‘enemies of the state’. For recent discussions of the corpse in non-Western contexts, see Olivier Allard, ‘To Cry One’s Distress: Death, Emotion, and Ethics Among the Warao of the Orinoco Delta’. *Journal of the Royal*

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  9. *Ibid.*, 28; see also Barbara Browning, *Infectious Rhythm: Metaphors of Contagion and the Spread of African Culture* (New York: Routledge, 1998); Wald, *Contagious*.
  10. Bruce Zalloua and Zahi Magnusson, ‘Introduction: The Hydra of Contagion’ in *Contagion: Health, Fear, Sovereignty*, eds Bruce Zalloua and Zahi Magnusson, pp. 3–24 (Washington DC: University of Washington Press), p. 4.
  11. *Ibid.*
  12. Robert Peckham, ‘Panic Encabled: Epidemics and the Telegraphic World’ in *Empires of Panic: Epidemics and Colonial Anxieties*, ed. Robert Peckham, pp. 131–154 (Hong Kong: Hong Kong University Press, 2015).
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  14. Christos Lynteris, ‘The Epidemiologist as Culture Hero: Visualizing Humanity in the Age of “the Next Pandemic”’. *Visual Anthropology* 29:1 (January 2016): 36–53.
  15. Tony D. Sampson, *Virality: Contagion Theory in the Age of Networks* (Minneapolis: University of Minnesota Press, 2012), 13.
  16. *Ibid.*
  17. Wald, *Contagious*, 14.
  18. *Ibid.*, 18.
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# Failed Ritual? Medieval Papal Funerals and the Death of Clement VI (1352)

*Joëlle Rollo-Koster*

It is the purpose of this chapter to investigate if and how the arrival of the Black Death, the dreaded fourteenth-century plague, influenced the burial practices and funerary rituals of the late medieval papacy. Contemporary writers everywhere described the painful and radical socio-cultural changes brought on by the pandemic, but fewer sources focused on the death of the ‘highest’ European of all, the leader of Christian Europe, the pope.

After reviewing summarily the recent historiography on the Black Death and burial practices, this chapter will turn to consider the papal death ritual. Grounded in information provided by ceremonial books of the late Middle Ages, this chapter will address the care of the papal corpse for its burial. Our knowledge of medieval ecclesiastical funerary practices comes from ceremonial books called *ordines*. These existed throughout the early Middle Ages, but the most explicit ceremonials were authored by François de Conzié and Pierre Ameil, both contemporaries of the Great Western Schism (1378–1417). This chapter will

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specifically rely on Pierre Ameil's *ordo* because of his focus on the Pope's body and his detailed orchestration of funerary practice, scripting behavior during the Pope's agony, embalming, exposition of the corpse, and transport to the funerary chapel. This investigation will then turn to the specific case of Clement VI (1342–1352), the pope who reigned during the initial assault of the disease in 1348, and one of Avignon's most flamboyant popes, whose 1352 funeral contradicted expectations and protocol. The events linked to Clement's funerals raise issues outside of the field of ritual studies. If burial protocol was altered during his funeral, some four years after the initial onslaught of the Black Death, was this specific breach tied to prevalent medical theory? Or, more plainly put, was his hasty burial linked to concepts of infection and contagion?

Because of Greek influence, historians have usually viewed medieval theories of contagion in somewhat negative terms. As Vivian Nutton states

On almost all ancient schemata, contagion, whether in the strict sense of a disease transmitted by touch or in the wider one of a disease of contiguity, was only rarely invoked to explain the origin of an illness, and even when it was, it formed only one part, and not necessarily the most important part, of a complex of overlapping alternatives.<sup>1</sup>

This approach has recently been somewhat refined with authors like Justin Stearns warning that 'if we recognise that diseases are social constructions at least as much as they are biological entities, then we need to maintain constant vigilance against the temptation of finding today's diseases and their means of transmission in the past'.<sup>2</sup> As we will see later, in the case of the plague, the late Middle Ages understood contagion, but linked it to the 'corrupted air theory'. This meant that people understood that the 'airborne' disease penetrated the body through the pores rather than via touching. Still, what Pope Clement's funeral-circumscribed example can demonstrate is that the arrival of the plague dismantled traditions even at the highest court of Europe.

While it is not my purpose to discuss the disease's origin and history, it can be stated that by the mid-fourteenth century the Black Death (in its bubonic, septicemic, and pneumonic forms) may have been the most devastating disease to have ever touched European soil, destroying between 30 and 60% of its population between 1346 and 1353. It is assumed, among rigorous discussions and debates, that the pandemic was caused by the bacterium *Yersinia pestis*, which traveled via the fleas of rats from China to the Crimea and from there on to European ports.

Maybe spurred on by the recent Ebola epidemics, plague studies have been blooming. In a recent essay, Monica H. Green qualifies the Black Death as ‘the highest of any large-scale catastrophe known to human-kind’.<sup>3</sup> She emphasizes how the growing field of microbiology has recently influenced plague studies, allowing the mapping the gene’s history, and, in 2011, the reconstruction of the *Yersinia pestis* genome. Her essay also highlights how even if questions are still being answered our knowledge of the geographic and chronological span of the so-called ‘Second Pandemic’ (for the disease’s late medieval iteration) has vastly increased. The Black Death ranged from Tibet to the Atlantic islands and the Mediterranean basin across species and climate zones, and could have begun as early as the 1260s. Giving relevance of the past to the present she determines that ‘evidence is increasingly suggesting that though small localized outbreaks of plague occur regularly wherever it has established enzootic foci, the commonality of more widespread outbreaks is due to climatic factors’.<sup>4</sup>

As the focus of research broadens, plague studies have become inter- and multi-disciplinary, uniting science, technology, engineering, and mathematics researchers with those from the humanities. Green concludes that

using the categories of modern science to reconstruct plague’s histories—adopting an outsider’s (etic) perspective on the material history of plague—is actually essential to reconstructing the history of participants’ experiences of those material conditions and the resulting experiences of sudden death, economic devastation, and social chaos (an emic perspective). Both are valid, and both are necessary to a historical enterprise that unites the efforts of scientists and humanists alike.<sup>5</sup>

It is evident that this pandemic had consequences far and wide: in a largely rural Europe, the population’s decline changed agricultural practices and facilitated a conversion from goods to cash rents. The surviving rural population may have even profited for a short while from more favorable living conditions. Rents went unpaid, land uncultivated, and the working force was temporarily able to negotiate favorable terms. Eventually, the lords resisted, demanding a return to status quo, while peasants and laborers rebelled. The so-called jacqueries and urban revolts of the second half of the fourteenth century were crushed, but the conversion to wage labor was irreversible; it spread from farmlands to urban centers, bringing Europe into a pre-modern, capitalist age.

With the arrival of the plague, individuals chose either retreat from the world or live hedonistically in the present for themselves, foregoing many of the charitable tenets of Christianity, like burying their ‘own’ dead. The European population became obsessed by death. We find ‘her’ in art, in the macabre gisants that adorned the tombs of the wealthy, in the danse macabre that accompanied parishioners to their churches, reminding them that ‘she’ was oblivious to status, social, and gender stratifications. ‘She’ was on the page of the *Ars moriendi*, training its readers to accept their fate with dignity and humility, and prepare for the inevitable.

Uncertainty overwhelmed the medieval mind. ‘She’ was God’s punishment for all human sin. Penance and repentance offered solace. Flagellants ambled the paths of the continent, singing, praying, prostrating themselves to no avail. The scourge did not abate. Flagellants in their zeal of purification also attempted to rationalize the unthinkable with extravagant accusations; sometimes they blamed the church, but most often the religious groups that had been historically marginalized, and mostly the Jews.

The age of the Black Death is the ‘dark age’ of pogroms and of accusations against ‘others’: heretics, the poor, healers, wanderers, or anyone else who did not conform tightly to Christian social norms. In an era of high stress and social anxiety, a society that represented itself in the image of a body—the Christian body—could easily rationalize healing itself with the ‘cutting off’ or ‘bleeding’ of its body’s diseased parts, in keeping with the bodily metaphor.<sup>6</sup> Eventually, the initial epidemic abated, and the European population learned to live with plague for the next 400 years or so.<sup>7</sup>

Clement VI, the ‘pope of the plague’, attempted to control the effect of the disease without overreacting.<sup>8</sup> The Black Death reached Avignon, where he resided, in February 1348.<sup>9</sup> It enters papal records under the term ‘mortalitatis pestem’.<sup>10</sup> A chronicler of Clement’s rule describes its effects. The plague caused ulcers and bumps (buboes, or *bossa*) in the groin area and armpits; survivors were too few in number to bury the dead. Kinship ties disappeared, parents and children abandoned each other as the disease killed humans along with cats, dogs, chickens, and other animals.<sup>11</sup> Clement acted in somewhat scientific fashion. According to sources, given that post-mortem examinations to identify cause of death were taking place in Italian cities, the pope also ordered them in Avignon.

Anatomical examinations, in which many corpses were opened, were carried out in many Italian cities, and also, on the pope's orders, in Avignon, to discover the origins of this disease, and it was found that all those who died suddenly had infected lungs, and had been coughing up blood. And this form is the most dangerous of all these terrible things, which is to say that it is the most contagious, for when one infected person dies everyone who saw him during his illness, visited him, had any dealings with him, or carried him to burial, immediately follows him, without any remedy.<sup>12</sup>

Louis Heyligen of Beeringen asserts that half of the population of Avignon died of the disease and, as in many other cities, the pope acquired new lands to bury the dead when local cemeteries proved insufficient. Clement offered spiritual comfort to the immense numbers of dying, granting a plenary indulgence to all those who were both 'confessed and contrite' and—because he was still a man of his time—recommended processions of atonement:

To be brief, at least half the people in Avignon died; for there are now within the walls of the city more than 7000 houses where no one lives because everyone in them has died, and in the suburbs one might imagine that there is not one survivor. Therefore the pope bought a field near Notre-Dame des Miracles and had it consecrated as a cemetery. By 14 March 11,000 bodies had been buried there, and that is in addition to those buried in the churchyards of the Hôpital de Saint-Antoine and the religious orders and in the many other churchyards in Avignon ... And the scale of the mortality means that for fear of death men do not dare to speak with anyone whose kinsman or kinswoman has died, because it has often been observed that when one member of a family dies, almost all the rest follow. And it is the common report among ordinary people that the sick are treated like dogs by their families—they put food and drink next to the sick bed and then flee the house ... Priests do not hear the confessions of the sick, or administer the sacraments to them. Everyone who is still healthy looks after himself. So it happens every day that a rich man is carried to his grave by these ruffians, with just a few lights and no mourners apart from them, for while the corpse is going along the street everyone else hides away indoors ... Around the middle of March, after mature deliberation, the pope granted a plenary indulgence to all those dying confessed and contrite; the indulgence to be valid until Easter. He also commanded the performance of devout processions with the chanting of litanies on specified days of the week.<sup>13</sup>

Linked to what could be labeled, maybe understandably so, mass hysteria, processions of penitents (flagellants) turned to violence. Using burial grounds as evidence, a team led by Anna Colet has recently demonstrated the link between this type of religious fervor and violence against the Jewish community. Escavating in the Catalan town of Tàrraga, Colet and her team unearthed communal graves where bodily remains showed evidence of brutalities. These physical remains corroborate Jewish and Christian textual evidence that mentioned some of the earliest violence against the Jewish population after the beginning of the plague in 1348.<sup>14</sup> Protecting the Jewish population as best as he could, the pope reissued in July 1348 the 1120 bull *Sicut Judaeis*, which originally protected the Jewish population in the aftermath of the First Crusade. In September 1348, Clement ordered his clergy to protect the Jews, and again in October spoke out against the pogroms, pointing to the financial motivations behind the attacks.<sup>15</sup> Still, the pope's involvement with the disease had its limits. According to the chronicler Mathias of Neuenburg, Clement spent the epidemic 'shut up in his chamber where he had large fires continually burning', hoping, along with many others, that isolation would keep contagion at bay.<sup>16</sup>

The Black Death killed many and there is no doubt that the pandemic affected funeral practice. Even though a semblance of normal funerary behavior can be found in places where the mortality did not impede traditional practices, mass graves appeared in numbers unencountered up to then. Traditional medieval burial saw the body washed, then wrapped in a shroud, and placed at the cemetery in either a coffin or directly into the ground.<sup>17</sup> Still, not all people (*naciones*) buried their dead without clothes. Gulielmo Durando's *Rationale divinatorum officiorum* (1230–1296) highlights an Italian custom that required laymen to be fittingly dressed, shoed and booted for Judgment Day.<sup>18</sup> One's status could affect the practice—monks wore their cowls and sometimes laymen also chose to follow a similar practice.<sup>19</sup>

Traditional burial occurred in consecrated ground, in a cemetery. Sharon Dewitte, discussing plague burials at East Smithfield in London, recognizes that while some cemeteries were appropriate for the increased number of dead caused by the plague, mass burial grounds were also utilized (as we have seen earlier in Avignon) to accommodate the growing numbers. East Smithfield cemetery was one of these mass burial grounds. Interestingly, mass burial did not equate with negligence. At East Smithfield the dead had been buried with care, laid on their back

with their heads toward the west and feet toward the east.<sup>20</sup> This correlates with the conclusion S. Kacki and her team reached for villages in the south of France. ‘Only when the highest peaks of mortality were reached, the customary funerary practices were discarded and mass graves were dug. This shows that despite the increased mortality may lead to the simultaneous inhumations of several individuals in the same pit, the funerary practices were not substantially modified.’<sup>21</sup>

This image of decorum contrasts with contemporary sources that paint disruptions like in Italy, where

the living made preparations for their burial, and because there was not enough room for individual graves, pits had to be dug in colonnades and piazzas, where nobody had ever been buried before. It often happened that man and wife, father and son, mother and daughter, and soon the whole household and many neighbours, were buried together in one place.<sup>22</sup>

In Provence,

When [people] are dead, boorish yokels from the mountains of Provence—poor, half-naked men, with no finer feelings—will come, and (assuming they are paid enough) will carry the dead to burial. Neither kinsmen nor friends visit the sick. Priests do not hear the confessions of the sick, or administer the sacraments to them.<sup>23</sup>

What these texts demonstrate is a breaking down of customary behavior and tradition. In summary, regarding burial practice, it can be assumed that while traditional practices remained in place as long as they were manageable, certain areas witnessed cultural dislocation by the sheer and overwhelming number of dead. It remains to be seen if ritual also broke down in the papal court.

Knowledge of medieval ecclesiastical funerary practices comes from ceremonial books—*ordines*. These existed throughout the early Middle Ages with, for example, the *Ordines Romani* centering on the liturgy of the great Roman churches. Yet the most explicit papal funerary ceremonies were the *ordines* of François de Conzié and Pierre Ameil.<sup>24</sup> Both authors focused on court ceremonials, regardless of the court’s location. Ritual uniformization is one of the church’s greatest successes; it allowed for continuity even as the court moved from one location to another—something quite common in the Middle Ages. Ceremonial books of

the mid-twelfth century prescribed that cardinals convene three times after the death of the pope: for his death and burial, the day after (for the Mass for the Dead), and on the third day to discuss the forthcoming election (after the Mass of the Holy Spirit). As in the case of anyone else, expectations rested on a somewhat quick burial of the pope after his passing. In 1274, Pope Gregory X's bull *Ubi periculum* defined the conclave (a safe and secretive space where cardinals focused solely on an unencumbered papal election) and lengthened the interval between death and burial to allow for the arrival of absent cardinals, and for the preparations of the cardinals' quarters within the conclave.

The span of time that separated death and burial became known as the *novena*, for its traditional nine days. It involved liturgy, ceremonial, and propaganda, and it aimed at emphasizing continuity. Lengthening the span of time between papal death and burial first of all separated the death of the pope from that of common mortals, and allowed the display of rituals that epitomized the continuity of the church. Ritual evolved in conjunction with the development of the papal 'dual-body' metaphor. His physical body died, but his institutional body persevered in the church. Following Byzantine imperial tradition, the pope's body was exhibited to the public.<sup>25</sup> In this way, the crowds could testify to the pope's death. Viewing the corpse with his visage uncovered, they looked upon the human face of the ecclesiastical institution, as the attending cardinal electors attested to the continuity of the church when they entered the conclave. *Novemdiales* (*novenas*) and honorific burial linked the maintenance of the ecclesiastical body with the demise of the physical body of the pope.<sup>26</sup> In sum, rituals and the political necessities of transitions somewhat formalized the development of various means to preserve the corpse, ideally for several days. Physical preservation buttressed the institutional goals of the transition from one pope to the next.

Cardinal Stefaneschi, who wrote one of the most thorough *ordines* sometime between 1300 and his death in 1341, clarified the *Ordo sepeliendi clericos romane fraternitatis* but did not offer much details of the death of the pope per se.<sup>27</sup> The first explicitly papal funerary ceremonials were the *ordines* of de Conzié and Ameil.<sup>28</sup> Since I have discussed the details of these *ordines* elsewhere, I will focus here solely on items specific to the care of the pope's body.<sup>29</sup> François de Conzié was named *camerlengo* of the pope by Clement VII in 1383 and kept the title until his death on 31 December 1431. As *camerlengo*, or chamberlain, his primary task was to head the Apostolic Chamber, the financial

organism that administered the revenues of the papacy. But his prerogatives ran far and wide, and the officer can be considered the ‘prime minister’ of medieval popes. As de Conzié was penning his ceremonial for the Avignon pope, his contemporary, the Patriarch of Grado, Ameil, was similarly penning one for the Roman Pope Urban VI, to whom he had remained faithful.<sup>30</sup> Pierre Ameil’s *ordo* covers the death of the pope, focusing more particularly on the pope’s body and its environment, prescribing behavior during the pope’s agony, embalming, exposition of the corpse, and transport to the funerary chapel. Ameil terminates his *ordo* with a rubric concerning the conclave and a few historical notes on the deaths of popes Gregory XI and Urban VI, noting the exact placement of the candles that adorned the latter pope’s coffin, a focus suggesting his attachment to the person of the deceased pope.

According to this ceremonial, the final hours of the pope were orchestrated with minutiae. Ameil advises that the physicians attending the pope should forewarn his confessors of his impending death so that they might help him prepare spiritually. The *camerlengo* was to summon the cardinals to the pope’s bedside some two or three days before the end to witness the pope’s drafting of his last will and testament, choose his burial site, and enjoin the cardinals with several recommendations including repaying the Church’s debt. The pope was to bless the cardinals before they withdrew.

Once left with his small group of familiars, the pope received the Final Anointing, and the *camerlengo* and chamberlains secured all his goods. Pillaging papal goods was a well-established tradition by the fourteenth century and protocol attempted to remedy it with protection.<sup>31</sup> The *camerlengo* ordered the closing and securing of all the gates of the papal palace, allowing only a single one to remain open for communication. Meanwhile, the pope confessed, received the Eucharist, and petitioned an indulgence *in mortis articulo*. Having described this, Ameil then moved to a detailed account of the body’s preparation for burial.

Discussing the embalming of popes, Agostino Paravicini Bagliani finds the first reference to this custom in the life of Pope Pascal II, who died in 1118 after a lengthy reign; in this case, cavities were not filled, but he was simply ‘covered with Balsam’.<sup>32</sup> Paravicini Bagliani considers the case isolated and independent from the later development of the public exposition ritual. Two centuries of silence follow Pascal’s case and the next detailed descriptions come from Ameil’s *ordo* dating from the 1380s. There is evidence of a somewhat formal cleansing *ordo* (if not specifically

embalming) before the fourteenth century in a book that describes the customs of the later thirteenth century (1261–1294), while discussing the role of the almoner in the papal obsequies. Almoners prepared the pope's corpse, dressed him according to custom after receiving papal regalia from the penitentiary, and then passed the body on to the penitentiaries.<sup>33</sup> As a somewhat dubious reward for these intimate services, the main almoner was to receive the bed in which the pope had died. Note that embalming was not really considered, and the corpse was simply 'prepared'; we can assume by rubbing it with oil and maybe balsam.

It can be assumed that since Boniface VIII's bull *Detestande feritatis* (also known as *de Sepulturis*), issued on 27 September 1299, prevented the cutting or portioning of the body to preserve it, embalming was supposed to maintain the integrity of the body for funerals. The bull responded to a practice that had developed throughout the thirteenth century with high-ranking ecclesiastical and royal officials and then spread to the middling class. Individuals required in their testaments that if they died abroad, or away from home, their flesh and bones be separated in order to have easily transportable remains buried in the location of their choice. Multiple burials allowed for a multiplicity of intercession and suffrages. Prayers would be uttered for a same person in different location, multiplying as such their efficiency.<sup>34</sup> Boniface states:

when one of theirs, either noble or high dignitary, dies away from his home (which is most often the case), when he had chosen to be buried in his land, or far away from where he died, Christians who follow this perverse custom moved by sacrilegious care, savagely drain him of his entrails, and horribly dismembering him or cutting him to pieces, throw him in water to boil him over the fire. When finally the flesh separates from bones they bring back the bones to the chosen place of inhumation.<sup>35</sup>

Boniface denounced all those who required to be disemboweled, boiled, and partitioned to be interred somewhere else than where they died. For the ones wishing reburial, Boniface favored a two-steps approach of, first, a local burial, followed by a later exhumation and transportation to the final resting place once the body had decomposed. For these later cases, we can assume that bodies were simply embalmed for the length of the viewing.

In his *regimen custodiae corporum mortuorum* the famous medieval surgeon Guy de Chauliac (1300–1368) explains two types of

embalming: a ‘clean’ practice for the cold season, which he considered a better fit for bodies that were skinny and dry, and a more invasive one, better fitting for fat bodies.<sup>36</sup> In both cases, the body was laid face-down to prevent swelling. If this measure failed, he recommended that the abdomen be punctured on several locations to release ‘water and wind’. De Chauliac adds that this advice came to him from an apothecary of the pope, Jacopo Migliorini, who claimed to have embalmed several popes.<sup>37</sup>

De Chauliac’s narrative of a traditional embalming relied heavily on Rhazes (854–925), the renowned Persian physician and philosopher.<sup>38</sup> De Chauliac lists all the spices to be employed in the creation of the embalming formulae (aloe, myrrh, acacia, etc.), and for lengthy exposures (as in the case of a pope) he recommends frequent washing of the body with salted rose water, or the rubbing of the body with a secret balm that he suspects exists because he has heard of it, but whose recipe he cannot find! It is of note that Rhazes’ embalming consisted of a tight wrapping of the body with adhesive bandages, and it is somewhat difficult to comprehend how a body could be simultaneously washed frequently for long conservation without removing all of these bandages. In any case, a prolonged exposition and lasting embalming required an extensive, time-consuming manipulation of the body. Loosely translated, the text recommends the following:

Regarding the preservation of the body of the dead.

There are two ways to preserve the body of the dead for some time, and for preventing putrefaction. The first one comes from Rhazes, by means of pushing into the intestines through the anus decoctions of enemas (*clisteribus*) made with bitter apple, and red borax. To conveniently execute the procedure one needs to put the dead’s head down then straighten it (*capite existent declivi and postea erecto corpore*), so that the body stands on its feet; one then compresses the stomach to expel all large feces (*stercus*). This done, one must inject the body with a second concoction (*clisteri*) made with aloe, myrrh, acacia, *ramic* (which is nutmeg, *gallia muscata*), alipte, the skin of pomegranates, cypress nuts, nutmeg, sandalwood, aloe wood, salt, cumin and alum dissolved in vinegar, and rose water, and clog the anus. This injection must be maintained in place with cotton and tow soaked in the same decoction, under a good bandage (*binda*) in order to contain and totally clog the plug. One will put quicksilver (mercury, *argentum vivum*) in the nostrils, ears and mouth to prevent the brain to liquefy. Rhazes then advises to soak the body for some time in that same

preparation (*medicamine*) and then that the body be covered with alkitrán, which is black pitch. Finally, he wants us to plug all holes and pores of the body by means of bandages that envelope and bind all parts. This is usually done like this: prepare large quantities of tape (*sparadrapi*), which is made with black pitch, resin, pine resin, incense, mastic, storax, arabic gum, and tragacanth, and the previous powder. One must have enough tape to envelop each separate leg to the buttocks, and each arm to the shoulder, and the rest of the body up to the head; and it must be sawn well formed with the tape snug against the skin, and seal the seams with melted pitch, arms must be placed along the sides, and legs and feet joined close to each other. Once done you must sprinkle the whole surface of the bandage with the powder described previously, and fill empty spaces with twisted tow soaked in the preparation of the second injection. And one wraps once again the whole body of the same tape ensuring that the seams of this second envelope are opposite those of the first, and one seals the seam with the same molten pitch that was used previously; then one powders for a second time with the same preparation the entire surface of this envelope, which must be covered for a third time with oilcloth and whose seams must be sealed with pitch. Once done one must bind the body tightly and with great strength like we do with bales of merchandise and once the body is wrapped in clean linen, it is placed in a sealed leaden coffin whose openings and edges have been sealed with a hot iron. One can put odoriferous herbs in the coffin such as roses, marjoram, mint, balsamithea, wormwood, and others, or we can put the body in a wooden box of cypress or walnut wood that will be sealed properly, and tied with iron bands, to which six rings will be attached to enable powering up and carrying conveniently. Some wrapped them in cow or horse leather.

For the second form of embalming, one must cut open the belly and pull out all of the entrails. Then one stuffs the cavity with the powder described above and with a great quantity of salt and cumin. After which the body is sewn back and wrapped like described above. If you want to preserve the entrails, you must clean them and powder them. Then put them in a leaden box, then in another box.<sup>39</sup>

Chauliac's embalming aimed at preventing the corpse's decomposition for at least eight days. Piero Argellata, a famed surgeon at the University of Bologna, confirmed this estimation when he prided himself on having prepared Alexander V's body so expertly that he lasted eight days. This was certainly an accomplishment, since Alexander V, who had died in Bologna in 1410, was left with his face, hands, and feet exposed and visible.<sup>40</sup>

Papal embalment did not follow Chauliac to the letter, but Ameil's rendering approximates his methods pretty accurately. The preparation and dressing of the corpse took place in the secret/private chamber of the pope.<sup>41</sup> As the penitentiaries recited the Office of the Dead, the seven penitential psalms, and other prayers contained in their books, brothers of the Bull (seal) Office or of the papal almshouse washed the pope's body with warm scented water, and a barber shaved his head and beard.<sup>42</sup> The brothers and an apothecary filled his anus, mouth, ears, and nose with cotton, oakum or myrrh, incense, or aloe if available, then they once again rubbed the body with a good white wine heated with smelling herbs, and with a good Garnache wine provided by a chamberlain or butler. The next step included stuffing the throat with herbs, spices, and cotton, his nostrils with muscade, rubbing the body vigorously, including the hands, and anointing it for one last time with a good balsam provided by the *camerlengo*.<sup>43</sup>

Once prepared, penitentiaries dressed the body with trousers (*bracas*), shirt (*camisiam*), hose (*caligas*), and a tunic (*tunicam*). They arranged the corpse 'as if sitting' (*quasi sedendo*) and covered the pope in his red papal garments (*sacris vestibus rubei coloris*) that included first his white sandals (*sandaliis albis*), belt and cincture (*cinctorio et subcinctorio*), fanon (*fano*), stole (*stola*), short tunic (*tinucella*), maniple (*manipulo*), dalmatic (*dalmatica*), gloves (*cirothecis*), chasuble (*planeta*), and a pallium borrowed from the body of St. Peter (*pallio de corpore Petri sumpto*)<sup>44</sup>; they folded the fanon (the short cape reserved solely to the pope that rested over his chasuble) on his head and around his shoulders as if he were going to officiate and placed on his head his white biretta and mitre without pearls or gold—'et plicent fanum super caput, et circa scapulas circumdent, ac si deberet celebrare, et ponant in capite eius birettam albam cum mitra alba sine perlis et sine auro'.<sup>45</sup> Ameil stresses that the cross found on the pallium was held by three pins, as customary, and the pope was laid on a bier over a mattress covered with red silk and gold cloth, his head and feet resting on pillows covered with silk and gold.<sup>46</sup> Ameil's next rubric details how penitentiaries transported the body from the papal chamber to the chapel, preceded by sub-deacons and cantors who sang the 'Subvenite sancti Dei' and how the body was eventually buried, sometimes only temporarily until a subsequent reburial at the pope's final resting place of choice.

Up to now I have emphasized texts that were written close to two generations after the arrival of the plague in 1348. Still, one can assume

that these written customs reflect and enshrine behavior that had been evolving for decades. It is my assumption that the preparation of the papal body did not change much between the thirteenth and fourteenth centuries. The preparation of the body was tied to the period of waiting that separated the burial of the deceased from the initiation of the conclave that would name his successor. The entire span of times covered some nine days (the *novena*). Thus the body had to be preserved, at the longest, for this span of time. But in reality most popes were buried a couple of days after their death, thus the methods of preservation did not need to be extraordinary. Still, it is worthwhile asking if the arrival of the plague in the mid-fourteenth century changed protocol and forced the ecclesiastical institution to adapt. Could we surmise a practical significance to embalming, to prevent for example foul odors and disease from escaping the decaying papal body and offending the noses of mourners? Evidence is scant, but it is still interesting to note that the most accute discussion of medieval embalming is found in Guy de Chauliac, the surgeon of the plague.

In addition, another question must be asked: if embalming preserved the corpse for public presentation and vigil, did the arrival of the plague freeze and stop this practice (we know it existed before its arrival) or accelerate its spread? In sum, was the stuffing of all body cavities recommended by individuals like de Chauliac (who were aware of the contagion), and embalming used as a means to prevent and contain the spread of the disease? Did embalming follow the ‘miasma’ theory of the time by preventing bad air from contaminating the attendants at the funerals? Or was embalming simply part of the transition of the double persona of the pope, mortal in his human body, but preserved for a few days so people could see that a pope like all humans died but remained immortal in his representation of the institutional body?

While we know that embalming was not frequently detailed in *ordines* until the 1380s, it seems that, again according to Chauliac, it was practiced in the middle of the fourteenth century, thus prior to the arrival of the plague. A way of testing the relationship between plague and embalming is to look at what happened to the body of the pope of the Black Death, Clement VI. According to the pope’s biographers as edited by Etienne Baluze, when Clement died on 6 December 1352 the funeral took place at Notre-Dame des Doms, and he remained there until he was brought to Chaise Dieu abbey, his final resting place. Intriguingly, a review of the six papal biographies shows no mention of the exposition

of the body.<sup>47</sup> Now, it should be noted that Clement's death could be labeled somewhat suspicious, especially during plague years. Clement's fifth biographer tells us that 'Clement, having held the papacy for ten years, was struck with an abscess on his back, he had gone for lunch with his family, and once left alone with his chamberlain, the abscess broke and submerged [drowned] his heart, he died suddenly.'<sup>48</sup> His second and third biographers mention that his burial took place the day after his death, on 7 December.<sup>49</sup> Clement had a 'growth' on his back and a severe illness that had lingered for more than a year after he made his deathbed confession in December 1351, a year before he actually died.<sup>50</sup> According to records, we know that the Apostolic Chamber spent a substantial 2490 florins for his funeral, including all the mourning cloths, embroideries (close to 400 florins just for these), alms, and masses. The scribe noted that on 7 December Peter of Frigidavilla, the administrator of the almshouse, received 400 pounds to give to the poor on the day Clement's body was carried to the church for his burial. In addition, on 7 December, Johannes de Seduno, the pope's almoner, received 40 pounds to throw to the crowd of poor (a tradition) while the casket traveled to its burial at Notre Dame des Doms. Similarly, the master of the wax received reimbursement for his expenses during the funeral, dated 6–8 December. Note that all the evidence comes together to indicate that 7 December was Clement's burial date, that is, a single day after his death. Clement's body was not exposed and laid in state, and thus liturgical protocol was breached. A scribe also cared to note that a smith had been paid to seal Clement's coffin shut—'*pro ferrando cassam sive archam, in qua repositus est d. Clemens papa VI, 20 jf*'—while he laid in the Chapelle Neuve of the papal palace before his burial in Avignon cathedral.<sup>51</sup> All elements show that Clement's body was not exposed, and buried rather rapidly, may I add, without respecting the *novena's* ritual.

While I have argued in *Raiding Saint Peter* that protecting the corpse and its expensive trappings may have been a means of protecting the pope's body from the traditional pillaging that took place at the death of a pope, I am now wondering if the epidemic did not rewrite Clement's funerary script.<sup>52</sup> If we look at a final piece of evidence, the chronicle of Albert of Strasbourg, we note that the chronicler states that after Clement's death his body was covered with lime to destroy the flesh in order to be exhumed and reburied at Chaise Dieu: '*positus in calce pro destructio carnis, in monasterio Casa Dei, in quo olim abbas fuerat, iussit se sepeleri*'.<sup>53</sup> Incidentally, this would match Boniface VIII's 1299 request

in his bull *Detestande feritatis* to hasten bodily decomposition before transportation in order to prevent post-mortem dismemberment. Still, one wonders if the passage of the plague did not also rescript Clement's hasty burial, speeding up decomposition and as such minimizing the risk an exposed body represented.

A means to test this supposition is to turn to Clement's successor. The humble Innocent VI (1352–1362) received the funeral expected of his rank, while Clement VI, ironically a man who thrived on pomp and who thought of himself as 'the pope who knew how to be pope', was buried somewhat like a commoner. Some ten years after Clement's hasty ritual, on 12 September 1362 records show that a certain Johannes Garrigie kept vigil with Innocent's body for two nights and recited masses.<sup>54</sup> The funeral lasted nine days—the usual *novena*. The body was exposed for two days in the Grande Chapelle of the palace, guarded with honors during vigils. Masses were sung throughout the days. The casket was then carried to the Cathedral of Notre-Dame des Doms on the first day of the *novena*, which ended with his inhumation on 22 September 1362 at the Charterhouse of Villeneuve-lès-Avignon. Expenses covered the various cloths necessary for the staff's mourning garb, funerary expenses, and the alms distributed to the various orders of the city, almshouses, hospitals, and the poor on the day the cortège transported the body from Notre-Dame to Villeneuve.

While the pope's funeral script had been re-established for Innocent, it is of note that it was again re-evaluated for the re-burial of Clement VI. In February 1353 Clement's body was exhumed in Avignon, we have to assume now decomposed, and transported to La Chaise-Dieu in accordance with his last wishes. His successor Innocent VI offered the sum of 5000 florins for the journey. The cortège that accompanied Clement to La Chaise-Dieu left on 28 February 1353. The procession included Hugues Roger, the late pope's brother, Cardinal of S. Lorenzo in Damaso; Guillaume de la Jugie, Cardinal Deacon of S. Maria in Cosmedin; Nicolas Besse, Cardinal of S. Maria in Via Lata; Clement's nephew Pierre Roger de Beaufort, the future pope Gregory XI, Cardinal Deacon of S. Maria Nova; Clement's cousin Guillaume d'Aigrefeuille, Cardinal of S. Maria in Trastevere; and Count Guillaume Roger de Beaufort, Clement VI's older brother. Still, the cortège was not as numerous as the forty-four figures that surrounded the pope's tomb at La Chaise-Dieu, representing the kin and friends that Clement had supported during his reign. His large and impressive tomb is still

visible there today.<sup>55</sup> For our purpose here it is important to note that Clement VI's 3500 florins and 120 gold écu tomb was planned during his lifetime, adorned with a white marble effigy designed by the tomb's architect and sculptor, Pierre Boye, and that surely to help in its design a wax portrait (*ex-voto*) '*formatam ad similitudinem pape*' had been sent to Chaise-Dieu in 1351.<sup>56</sup> Hence, in the case of Clement, if his physical state had prevented an ostentatious display of the papal corpse during his actual funeral, his reburial allowed making up for lost ritual. People never saw his face unveiled during the monstration, but the procession that accompanied his reburial to Chaise-Dieu resembled the typical papal funerary procession, with, for this occasion, a papal effigy awaiting at his arrival.

What this somewhat convoluted analysis may demonstrate is that in some cases concerns could rewrite traditional liturgical scripts. After the height of the plague even the pope's household was conscious of the danger caused by an infected body (even if Clement did not die of the plague) and remained suspicious enough to rewrite the script of the pope's funeral, going as far as covering his body in lime to hasten his decomposition. Late medieval scientists looked beyond the 'god's wrath' approach to the disease, even accepting the latter premise did not preclude studying its physical manifestation. Among various theories ranging from a certain alignment of planets to volcanic eruption, the dominant causation of the disease and its spread was found in miasma or the corrupted air theory. As Rosemarie Horrox explains

Scientists were agreed that the physical cause of plague was the corruption of the air—or, rather, since air was an element and could not change its substance—the mixing of air with corrupt or poisonous vapours, which when inhaled would have a detrimental effect on the human body. Where they differed was in the explanations they gave for the corruption. Some causes were obvious. Everyone agreed that the air could be poisoned by rotting matter, including dead bodies, or by excrement or stagnant water.<sup>57</sup>

She offers ample evidence supporting this medieval understanding of infection or contagion.<sup>58</sup> Medieval public health and sanitation actually functioned on this basis and was essentially not as 'backward' as generally assumed; anything that putrefied and rotted was usually ordered removed from public sight and smell to prevent contagion while aromatics offered a preventive. Anything aromatic from the burning of incense

to spices offered palliatives. A warm or hot body favored aerial penetration, thus behavior also needed to be accommodated and exertion avoided. The corrupt air theory was so pervasive that, as Luke Demaitre argues, ‘even though “contagion” is derived from the Latin word for touching, in the manuals ... the term referred to infection by air rather than to direct physical contact’.<sup>59</sup>

As Carole Rawcliffe has recently demonstrated in her magisterial *Urban Bodies*, ‘the conviction that epidemics spread through the medium of polluted air remained unshaken until the reign of Queen Victoria’, and precipitated sanitary measures in most medieval cities.<sup>60</sup> Although the words ‘infection’ and ‘contagion’ in their Latinized forms did not appear in documentation before the sixteenth century, Annemarie Kinzelbach shows that ‘Inhabitants of late medieval and early modern towns in southern Germany had notions of both “miasma” and “contagion.”’ She adds, “Infection,” for example, signified something nonphysical passed on to others or received from them, something physical or non-physical in the air entering the human beings, something that was transported by contact with persons and things, and an organism like a worm in fishes.’<sup>61</sup> These ideas were not limited to northern Europe. Focusing on universities’ masters of the late Middle Ages (mainly French and Italian), Jon Arrizabalaga already concluded in his seminal 1994 article that

The concept of contagion as a means of pestilence transmission from one person to another is present in most of these works, in clear disproof of the widely accepted historical assumption that this idea and its development in the late Middle Ages were achievements of the city laymen’s ‘healthy’ empiricism opposed to the aerist and miasmatic views held by university physicians. As said above, air spread and contagion can no longer be considered as contradictory views of the diffusion of pestilence, but rather as referring to two different and successive stages of its dissemination, the air being in addition the place where pestilence is first generated.<sup>62</sup>

A final evidence for the presence of ideas of contagion and infection in the late Middle Ages can be found in social reactions and behavior. Discussing Milanese responses, Ann Carmichael states ‘The Milanese practices during epidemics would lead eventually to the most brutal—if in some sense logical-expression of an unqualified contagion theory: prosecution, persecution and execution of the *untori* or plague spreaders in the 1630 plague.’<sup>63</sup> Thus it could be argued retroactively that most

medieval plague legislations that enforced quarantines and ejected perceived ‘polluted’ bodies from their urban perimeters in fact understood the concepts of contagion and infection.<sup>64</sup>

But the question of Clement’s funeral remains. Was the papal court at Avignon cognizant of the latest medical theories? There is no doubt that it was. After all, Clement requested the presence of Guy de Chauliac, one of the most renowned physicians of his time, at his court. Clement was an educated pope who read what was called ‘natural philosophy’, or natural sciences. He was not, for his era, a religious ‘obscurantist’. And he searched for solutions.<sup>65</sup> His papal letters offer little mention of concrete medical notions to fight the ‘*mortalitatis pestem*’, if only one order to cease preaching the crusades in Cyprus because soldiers could not be available in sufficient numbers to defeat the Turks.<sup>66</sup> The pope’s focus remained on spiritual and financial palliatives, offering plenary indulgences, and lightening or eliminating ecclesiastical taxes in areas that had been the most touched. Avignon and its administration also understood the concept of infection. Like many European cities, it enacted throughout the period sanitary regulations that aimed at promoting urban hygiene and healthy living conditions.<sup>67</sup>

Thus, I would suggest that Clement’s funeral reflected his reign and court. For his entourage, even the pope remained a man, and his decomposing body’s emanations and secretions could transmit the disease. Re-burial may have been in his case a convenient excuse to quickly dispose of his body during his funeral. The link between the dead body and the epidemic had been made, to the point of changing what should have been immutable: the papal funerary script. Only Clement’s reburial corrected the breached protocol of his death and restored decorum. Once the shock of the first onslaught of the disease passed, traditions and protocol fell back into place. The death of a pope could be honored with a showing of his body, corrupted or not.

## NOTES

1. Vivian Nutton, ‘Did the Greeks Have a Word For It? Contagion and Contagion Theory in Classical Antiquity’ in *Contagion: Perspectives from Pre-modern Societies*, Lawrence I. Conrad, and D. Wujastyk, eds. (Aldershot: Ashgate, 2000), p. 161.
2. Justin K. Stearns, *Infectious Ideas: Contagion in Premodern Islamic and Christian Thought in the Western Mediterranean* (Baltimore: Johns Hopkins University Press, 2011), p. 5.

3. Monica H. Green, 'Editor's Introduction' in *Pandemic Disease in the Medieval World: Rethinking the Black Death. The Medieval Globe* vol. 1, Monica H. Green, ed. (Kalamazoo MI: Arc Medieval Press, 2014), p. 9. I refer to her bibliography for an up-to-date discussion of the causes and consequences of the disease.
4. Green, 'Editor's Introduction', p. 13. In a second article Green reiterates her suggestion that the disease affected a large span of Afro-Eurasia, including sub-Saharan Africa and the coasts of the Indian Ocean. See Monica H. Green, 'Taking "Pandemic" Seriously: Making the Black Death Global' in *Pandemic Disease in the Medieval World: Rethinking the Black Death. The Medieval Globe*, vol. 1, Monica H. Green, ed., pp. 27–61 (Kalamazoo MI: Arc Medieval Press, 2014).
5. Green, 'Editor's Introduction', p. 15.
6. On the metaphors of the body Christian and politic, see my 'Body Politic' in *Sage's Encyclopedia of Political Theory*, ed. Mark Bevir (Thousand Oaks: Sage, 2010), vol. 1, pp. 133–137.
7. Among a large literature and by no means an exhaustive list, see, in chronological order, Philip Ziegler, *The Black Death* (London: Collins, 1969); Rosemary Horrox, *The Black Death* (Manchester: Manchester University Press, 1994); David Herlihy and Samuel Kline Cohn, *The Black Death and the Transformation of the West* (Cambridge, MA: Harvard University Press, 1997); John Aberth, *From the Brink of the Apocalypse: Confronting Famine, War, Plague, and Death in the Later Middle Ages* (New York: Routledge, 2000); Ole J. Benedictow, *The Black Death, 1346–1353: A Complete History* (Woodbridge: Boydell & Brewer, 2004); John Aberth, *The Black Death: The Great Mortality of 1348–1350—A Brief History with Documents* (Boston: Bedford/St. Martin's, 2005); Green, ed., *Pandemic Disease*.
8. For a discussion of Clement VI see: Diana Wood, *Clement VI: The Pontificate and Ideas of an Avignon Pope* (Cambridge: Cambridge University Press, 1989); Étienne Anheim, *Clément VI au travail: Lire, écrire, prêcher au XIV<sup>e</sup> siècle* (Paris: Publications de la Sorbonne, 2014); and Joëlle Rollo-Koster, *Avignon and its Papacy (1309–1417): Popes, Institutions, and Society* (Lanham MD: Rowman & Littlefield, 2015), pp. 69–85.
9. Etienne Baluze and Guillaume Mollat, *Vitae paparum avenionensium; hoc est Historia pontificum romanorum qui in Gallia sederunt ab anno Christi MCCCIV usque ad annum MCCCXCIV*, vol. 1 (Paris: Letouzey et Ané, 1914–1927), p. 305.
10. See for example in the papal letters *Ut per litteras apostolicas: Les lettres pontificales* (Rome: École française de Rome, 2011), #003965, a letter dated 24 September 1348 allowing a derogation of normal statutory rule

of entrance into minor and major orders because too many clergymen have died, cannot be replaced, and sacraments go uncarried; or #002496, dated 8 September 1351, requiring the cessation of the preaching of the crusade because of the high mortality.

11. Baluze and Mollat, *Vitae paparum avenionensium*, p. 251.
12. Horrox, *The Black Death*, p. 42.
13. *Ibid.*, 43–44.
14. Anna Colet, Josep Xavier Muntané i Santiveri, Jordi Ruíz Ventura, Oriol Saula, M. Eulàlia Subirà de Galdàcano, and Clara Jáuregui, ‘The Black Death and Its Consequences for the Jewish Community in Tàrraga: Lessons from History and Archeology’ in Green, ed., *Pandemic Disease*, pp. 63–96.
15. Horrox, *The Black Death*, p. 221.
16. Aberth, *From the Brink*, p. 120.
17. Sacha Kacki, Lila Rahalison, Minoarisoa Rajerison, Ezio Ferroglio, and Raffaella Bianucci, ‘Black Death in the Rural Cemetery of Saint-Laurent-de-la-Cabrerisse Aude-Languedoc, Southern France, fourteenth Century: Immunological Evidence’. *Journal of Archaeological Science* 38 (2011): 582.
18. ‘Debent quoque fideles christiani sepeliri induti sudariis, prout Prouinciales obseruant, quod sumunt ex euangelio in quo legitur de sudario et sindone Christi. Quidam uero cilicio insuuntur, ut hac ueste insignia penitentie representent, nam cinis et cilicium arma sum penitentium. Nec debent indui uestibus communibus, prout in Italia fit; et ut quidam dicunt debent habere caligas circa tibias et subtelaes in pedibus, ut per hoc ipsos esse paratos ad iudicium represententur.’ Guillelmus Durandus, *Rationale divinatorum officiorum*, A. Davril, T. M. Thibodeau, and B. G. Guyot, eds. (Turnhout: Brepols, 2000), lib. VII, cap. 35, par. 40, l, pp. 442–446.
19. See Joëlle Rollo-Koster, ‘Avignon’s Capitalization and the Legitimation of Transiency’ in *Images and Words in Exile: Avignon and Italy in the First Half of the Fourteenth Century (ca. 1310–1352)*, Elisa Brillì, Laura Fenelli, and Gerhard Wolf, eds. (Florence: SISMELE-Edizioni del Galluzzo, 2015), pp. 266–269, where I discuss laymen and women’s requests to be buried in mendicant cowl.
20. Sharon N. DeWitte, ‘The Anthropology of Plague: Insights from Bioarcheological Analyses of Epidemic Cemeteries’ in Green, ed., *Pandemic Disease*, pp. 104–105.
21. Kacki et al., ‘Black Death’, p. 586.
22. Horrox, *The Black Death*, p. 21.
23. *Ibid.*, p. 44.
24. This early section of the chapter revisits an earlier version presented in ‘Death of Clergymen: Popes and Cardinals’ Death Rituals’ in Joëlle Rollo-Koster, ed., *Dying in the Middle Ages: Death Scripted Death*

- Choreographed* (New York and London: Routledge, 2016), pp. 164–185. See also Marc Dykmans, *Le cérémonial papal de la fin du moyen âge à la renaissance: Les textes avignonnais jusqu'à la fin du grand schisme d'occident* (Bruxelles: Institut historique belge de Rome, 1983) and *Le cérémonial papal de la fin du moyen âge à la renaissance: Le retour à Rome ou le cérémonial du patriarche Pierre Ameil* (Bruxelles: Institut historique belge de Rome, 1985), pp. 216–233.
25. On ritual exchanges between Eastern and Western church see Uta-Renate Blumenthal, *The Investiture Controversy: Church and Monarchy from the Ninth to the Twelfth Century* (Philadelphia: University of Pennsylvania Press, 1988); Agostino Paravicini Bagliani, *The Pope's Body* (Chicago: University of Chicago Press, 2000); Alexander Daniel Beihammer, Stavroula Constantinou, and Maria G. Parani, *Court Ceremonies and Rituals of Power in Byzantium and the Medieval Mediterranean: Comparative Perspectives* (Leiden: Brill, 2013).
  26. Agostino Paravicini Bagliani, *Morte e elezione del papa* (Rome: Viella, 2013), pp. 215–226.
  27. Marc Dykmans, *Le cérémonial papal de la fin du moyen âge à la renaissance: Tome II. De Rome en Avignon ou le cérémonial de Jacques Stefaneschi* (Brussels: Institut historique belge de Rome, 1981).
  28. Marc Dykmans, *Le cérémonial papal de la fin du moyen âge à la renaissance: Les textes avignonnais jusqu'à la fin du grand schisme d'occident* (Bruxelles: Institut historique belge de Rome, 1983) and *Le cérémonial papal de la fin du moyen âge à la renaissance: Le retour à Rome ou le cérémonial du patriarche Pierre Ameil* (Bruxelles: Institut historique belge de Rome, 1985), pp. 216–233.
  29. I discussed the detail of these *ordines* in my *Raiding Saint Peter: Empty Sees, Violence, and the Initiation of the Great Western Schism (1378)* (Leiden and Boston: Brill, 2008), pp. 44–59. To date, they have been used mainly by Agostino Paravicini Bagliani, *The Pope's Body* (Chicago: University of Chicago Press, 2000) and *Morte*, pp. 226–251.
  30. Dykmans, *Le cérémonial papal de la fin du moyen âge*, pp. 216–233.
  31. This is the topic of my *Raiding Saint Peter* and 'Episcopal and Papal Vacancies: A Long History of Violence' in *Ecclesia et Violentia: Violence against the Church and Violence within the Church in the Middle Ages*, eds. Radoslaw Kotecki and Jacek Maciejewski, pp. 54–71 (Newcastle upon Tyne: Cambridge Scholars Publishing, 2014).
  32. Paravicini-Bagliani, *The Pope's Body*, p. 134.
  33. *Ibid.*, p. 306.
  34. On this practice see Agostino Paravicini Bagliani, 'Démembrement et intégrité du corps au XIIIe siècle'. *Terrain* 18 (1992): 26–32; on the multiplicity of intercessionary suffrages see Jacques Chiffolleau, *La*

*comptabilité de l'au-delà: Les hommes, la mort et la religion dans la région d'Avignon à la fin du moyen âge, vers 1320–vers 1480* (Rome: École française de Rome, 1980).

35. Paravicini Bagliani, 'Démembrement et intégrité', p. 29. My translation.
36. It should be highlighted that Chauliac lived at the papal court and served as 'physician of the pope' for Clement VI; for his biography see André Thevenet, 'Guy de Chauliac, père de la chirurgie'. *Bulletin de l'Académie des sciences et lettres de Montpellier* 28 (1998): 207–222. For the quoted passage see Guido de Chauliaco, *Cirurgia magna*, tract. 6, doct. 1, ch. 8. See also *La Grande chirurgie de maistre Guy de Chauliac ... traduite nouvellement en François ... par Maistre Simon Mingelousaulx ... première édition [suivi de l'Antidotaire]* (Bordeaux, 1672), pp. 522–524
37. Joëlle Rollo-Koster, *The People of Curial Avignon: A Critical Edition of the Liber Divisionis and the Matriculae of Notre Dame la Majour* (Lampeter, UK and Lewinston, ME: The Edwin Mellen Press, 2009), pp. 91, 139, 165, 330–331; Anne-Marie Hayez, *Le terrier avignonnois de l'évêque Anglic Grimoard: 1366–1368* (Paris: CTHS, 1993), p. 156.
38. See for example Rāzī, Abū Bakr Muḥammad ibn Zakariyā, and María de la Concepción Vázquez de Benito, *Libro de la introducción al arte de la medicina o 'isagoge'* (Salamanca: Ediciones Universidad de Salamanca, Instituto Hispano-Arabe de Cultura, 1979); Rāzī, Abū Bakr Muhammad ibn Zakariyā, *The Spiritual Physick of Rhazes* (London: Murray, 1950); Sarah Stroumsa, *Freethinkers of Medieval Islam: Ibn Al-Rawāndī, Abū Bakr Al-Rāzī and Their Impact on Islamic Thought* (Leiden: Brill, 1999); and Rawiya al Waseet, *Al Razi* (London: Islamic Information Services, 1978).
39. Guido de Chauliaco, *Cirurgia magna*, tract. 6, doct.1, ch. 8, in for example the most recent edition, Guignonis De Caulhiaco (Guy de Chauliac), *Inventarium sive chirurgia magna*, ed. Michael McVaugh (Leiden: Brill, 1997), pp. 307–308; or Guido de Chauliaco, *Cirurgia magna*, tract. 6, doct.1, ch. 8 in *La Grande chirurgie de maistre Guy de Chauliac ... traduite nouvellement en François ... par Maistre Simon Mingelousaulx ... première édition [suivi de l'Antidotaire]* (Bordeaux, 1672), pp. 522–524.
40. Paravicini Bagliani, *Morte*, pp. 240–241. Traditionally, the face of the pope was covered when exposed in the chapel, uncovered for the public display in the church, and covered again when he laid on his bier.
41. 'Lavatur enim in camera secreta, et induitur sacris vestibus, prout est dictum'; Dykmans, *Le cérémonial papal de la fin du moyen âge*, p. 220.
42. *Ibid.*, p. 218.
43. 'apothecarius et dicti fratres de bulla obturent sibi bene omnia foramina cum bumbasio vel stupa, anum, os, aures, nares, cum myrra, thure, et aloe, si possit habere [...] lavetur etiam corpus cum bono vino albo et calefacto

*cum herbis odoriferis, et cum bona vernagia, que cubicularii vel buticularii pape debent dictis lavatoribus administrare [...] 'Guttur vero impletur de aromatibus et speciebus cum bombasio, et etiam nares cum musqueto. Ultimo etiam totum corpus multum fricetur et ungetur cum balsamo bono, et etiam manus'* in *ibid.*, p. 219.

44. On the consecration of the pallium in the tomb of St. Peter or at the altar of St. Peter see Sible de Blaauw, *Cultus et decor: liturgia e architettura nella Roma tardoantica e medievale: basilica Salvatoris, Sanctae Mariae, Sancti Petri*, vol. 2 (Città del Vaticano: Biblioteca apostolica vaticana, 1994), pp. 710–712 and Steven A. Schoenig, *Bonds of Wool: The Pallium and Papal Power in the Middle Ages* (Washington, DC: The Catholic University of America Press, 2016).
45. Dykmans, *Le cérémonial papal de la fin du moyen âge*, p. 219.
46. *'Ipso vero sic parato, dicti penitentiarii ponant eum super feretrum novum vel lectica, in quo debet esse bonum matalacium coopertum de serico rubeo cum una pulcra vona seu coopertorio etiam de serico rubeo, et desuper debent esse duo panni de auro se tenentes. [...] Item subtus caput eius sit pulvinar coopertum de panno aureo. Et post pedes eius in eodem feretro aliud pulvinar consimile cum floxis de serico et cordonibus de auro super quod debent stare duo capelli seu pilei pape. Pulvinaria debent esse latitudinis feretro.'* *Ibid.*, pp. 219–220.
47. See Baluze and Mollat, *Vitae paparum avinionensium*, 'Vitae 1 Clement', p. 261: 'Ipse tamen finaliter infirmitate gravatus, humiliter penitens de commissis, devotique receptis ecclesiasticis sacramentis, in veritate et sinceritate fidei ac unitate sancte matris Ecclesie spiritum *Domino commendavit anno Domini MCCCLIJ, die sexta mensis decembris, pontificatus sui anno undecimo. Fuitque sepultus in ecclesia majori Avinionensi, demum transferendus ad dictum monasterium Case Dei, in quo vivens suam perpetuam elegerat sepulturam. Vacavitque Sedes diebus duodecim*'; 'Vitae 2 Clement', p. 272: 'Illum enim quedam tunc invasit infirmitas, propter quam *sexto die mensis decembris* tunc immediate sequentis, in videlicet beatissimi Nycholay festo, *spiritum Domino reddidit*, et memoria ejus in benedictione semper erit. *Exequie vero dicti summi pontificis in cathedrali ecclesia Beate Marie Avinionensis fuerunt in c[r]astinum [7 decembris] sollempniter celebrate*. Et demum exinde corpus ejus juxta dispositionem ipsius ad predictum Case Dei monasterium, quod ipse pontifex in ecclesia et domibus mirabiliter ampliavit et possessionibus augmentavit, fuit portatum per dominos fratrem et nepotes ipsius cardinales et comitem Bellifortis aliosque nepotes et consanguineos ejus, simul et dolentissime nec minus cerimonialiter quam honorabiliter sociatum, sed virtus ejus honoris obsequium non attingit, et in sepulcro novissimo, quod ipsemet vicens et vivens in Villanova, Avinionensis dyocesis, sibi fecerat

fabricari, quodque pretiosissimi et politissimi operis est, illuc delato et in capella quam preter illas supradictas construi fecerat sepultus est clementissimus ille Clemens anno Domini MCCCLIJ, pontificatus sui undecimo, die sexto mensis decembris; anima cujus in pace requiescat. Amen'; 'Vitae 3 Clement', p. 288: 'Illum enim quedam invasit infirmitas, propter quam sexto die mensis decembris, tunc immediate sequentis, in festo beati Nicholai spiritum Domino reddidit, et memoria ejus in benedictionibus erit semper. Exequie ejus in ecclesia beate Marie Avinionensis fuerunt in crastinum sollempniter celebrate. Et demum exinde corpus ejus, juxta dispositionem ipsius, apud predictum Case Dei monasterium, quod ipse pontifex in ecclesia et domibus ampliavit, et capellaniis bene dotavit, et possessionibus augmentavit quampluribus, decoravit honorifice, portatum fuit per dominos [fratrem] et nepotes ipsius cardinales superius nominatos, necnon per alterum fratrem ejus, dominum comitem Bellifortis, aliosque nepotes et consanguineos ejus, quos in papatu bene noverat, nullo spreto, devotissime simul et dolentissime nec minus cerimonialiter quam honorabiliter sociatum, sed virtutes ejus honorum obsequium non attingit, et in sepulcro novissimo, quod ipse in Villanova, Avinionensis diocesis, fieri sibi fecerat fabricari, quodque politissimi et pretiosissimi operis est, illuc delato, et in capella quam preter alias supradictas pinguissime reddituatam ad hoc a fundamentis ibi construi fecerat situato sepultus est clementissimus ille Clemens, clementie speculum, caritatis hospes, misericordie pater, pietatis allumpnus, liberalitatis minister, justitie pugil, equitatis athleta, concordie sator, et pacis amator, modestie norma, religionis exemplar, amicitie fomes, anchora spei, fidei basis, complacentie mos, eloquentie flos, honor generis et patrie decus; anima cujus requiescat in pace. Amen. Sedit annis XJ, mensibus VJ et diebus XVJ'; 'Vitae 4 Clement', p. 297: 'Hic die sexta decembris, in die sancti Nicolai, anno Domini MCCCLIJ, Avinione, in palatio apostolico, ad Christum migravit. Sepultus est in monasterio de *la Casa de Dio*, Claromontensis dyocesis.' The emphasized Italics are mine.

48. Baluze and Mollat, *Vitae paparum avenionensium*, 'Vitae 5 Clement', p. 303: the most medical, 'Postquam vero predictus Clemens papatum tenuerat per decem annos, percussus apostemate in dorso, cum familiares sui ivissent prandere, solo camberlano secum relicto, ipsius apostema erumpens et cor ejus submergens, subito expiravit.'
49. Baluze and Mollat, *Vitae paparum avenionensium*, 'Vitae 2 Clement', p. 272 and 'Vitae 3 Clement', p. 288.
50. Odoricus Raynaldus and Caesar Baronius, *Annales Ecclesiastici Ab Anno Quo Desinit Card. C. Baronius, 1198 Usque Ad Annum 1534(-1565) Continuati ... Auctore O. Raynaldo*, Etc. Tom. 13-21 (1694), vol. 6, Chap. 38, p. 550.

51. Karl-Heinrich Schäfer, *Die Ausgaben der apostolischen Kammer unter Benedikt XII, Klemens VI und Innocenz VI* (Paderborn, 1914), pp. 481–482.
52. Rollo-Koster, *Raiding Saint Peter*, p. 141.
53. Christian Wurtisen, *Germaniae historici, qui post Henrici III imperatoris aetatem trecentis annis scripserunt / 2 Continens Dominicanorum Colmariensium fastos, Conradum Vecerium de Henrico VII Imp. et M. Alberti Argentinensis Chronicon integrum, à Rudolpho primo, vsque ad Caroli quarti obitum ... Cum rerum et verborum Indice copiosissimo* (Francofvrdi: Wechel, 1585 apud heredes Andreae Wecheli, 1586), p. 156.
54. Baluze and Mollat, *Vitae paparum avinionensium*, ‘Vita 1 Innocent VI’, p. 330: ‘Domini MCCCLXII, die XII mensis septembris, pontificatus sui anno decimo fuitque sepultus in ecclesia majori Avinionensi, demum transferendus ad dictam domum Cartusiensem Villenove, in qua vivens suam perpetuam elegerat sepulturam. Vacavitque Sedes diebus quadraginta quinque. Et circa idem tempus, paulo ante, obierat [26 maii 1362] Ludovicus, rex Sicilie, Johanna regina, conjuge ejus, remanente sine quacumque prole.’ Eugène Déprez, ‘Les funérailles de Clément VI et d’innocent VI d’après les comptes de la cour pontificale’. *Mélanges d’archéologie et d’histoire* 20 (1900), pp. 248–249 quotes, ‘Item pro exequiis prefati quondam domini Innocentii pape VI, videlicet domino Johanni Garrigie preposito Barchinonensi, pro expensis per ipsum factis de mandato dominorum cardinalium de Canilhaco, Lemovicensis et de Urcinis et camerarii Sedis Apostolice, videlicet pro illis qui dictum *funus vigilaverunt per duas noctes* et pro illis qui missas in magna capella palatii celebraverunt, quamdiu funus ibidem fuit, et etiam dum funus portabatur ad ecclesiam more solito, ac etiam pro helemosina data cuilibet conventu[i] quatuor ordinum mendicantium et septem conventibus monialium et Cartusiensium Villenove et pauperibus religiosis et hospitalibus Avinionensibus, et pro C. missis celebrandis singulis diebus per novenam ipsius domini pape, ac pro helemosina data prelati et personis religiosis ac presbiteris et clericis verecundis, et pro preparando dictum funus M V° XX V flor. — Item VIIe L lib. monete Avinionensis. Item magistro Guillelmo Adzemarii olim custodi cere dicti quondam domini nostri pape de expensis factis per eum de mandato domini camerario pro cendato albo nigro et rubeo, tela et torticiis per ipsuim factis fieri et certis expensis per ipsum factis pro dictis exequiis in magno libro declaratis M VIIe LXII flor. IX s. XI den. ob. — Item Lamberto Lambertesqui et ejus sociis societatis Albertorum antiquorum habitatoribus Avinionensibus pro pannis per ipsos traditis et deliberatis pro raubis nigris certorum familiarium ipsius quondam domini nostri pape, V IIIe VI flor. XVIII s. VI d. Summa totalis soluta pro dictis exequiis contenta in presenti Capitulo

- est IIII CXCIII flor. VII LI lbr VIII s. V den. ob. monete Avinionensis. (Arch. Vat., Introitus ex Exitus, 296, f° 71 recto). Déprez, 'Les funéraires', actually remarks that his funeral was grander than his predecessor: see p. 241.
55. Eugène Déprez, 'Les funéraires', 238–239.
  56. Julian Gardner, *The Tomb and the Tiara: Curial Tomb Sculpture in Rome and Avignon in the Later Middle Ages* (Oxford: Clarendon Press, 1992), p. 144.
  57. Horrox, *The Black Death*, p. 100.
  58. See for examples Horrox, *The Black Death*, pp. 158–206.
  59. Luke E. Demaitre, *Medieval Medicine: The Art of Healing, from Head to Toe* (Santa Barbara, CA: Praeger, 2013), p. 63.
  60. Carole Rawcliffe, *Urban Bodies: Communal Health in Late Medieval English Towns and Cities* (Woodbridge, UK: The Boydell Press, 2013), pp. 124–125.
  61. Annemarie Kinzelbach, 'Infection, Contagion, and Public Health in Late Medieval and Early Modern German Imperial Towns'. *Journal of the History of Medicine and Allied Sciences* 61 (2006): 388.
  62. Jon Arrizabalaga, 'Facing the Black Death: Perceptions and Reactions of University Medical Practitioners' in *Practical Medicine from Salerno to the Black Death*, eds. Luis García-Ballester, Roger French, Jon Arrizabalaga, and Andrew Cunningham (Cambridge, Cambridge University Press, 1994), p. 287.
  63. Ann G. Carmichael, 'Contagion Theory and Contagion Practice in Fifteenth-Century Milan'. *Renaissance Quarterly* 44 (1991): 254.
  64. I am thinking here more specifically about anti-Semitic legislations. See for examples Horrox, *The Black Death*, pp. 206–226.
  65. For the latest discussion on the pope see Étienne Anheim, *Clément VI au travail: Lire, écrire, prêcher au XIVe siècle* (Paris, Publications de la Sorbonne, 2014). See also my *Avignon and its Papacy (1309–1417): Popes, Institutions, and Society* (Lanham, MD: Rowman & Littlefield, 2015), pp. 69–85 for a discussion of Clement VI and more specifically pp. 82–84 for his actions during the plague. Diana Wood, *Clement VI: The Pontificate and Ideas of an Avignon Pope* (Cambridge: Cambridge University Press, 1989) remains the fundamental biography of the pope.
  66. See *Ut per Litteras*, Clément VI, # 002496 (dated 8 September 1351).
  67. See Rollo-Koster, *Avignon and its Papacy*, pp. 229–233.

# Fear and the Corpse: Cholera and Plague Riots Compared

*Samuel Cohn Jr.*

A consensus among historians of medicine would have us believe that hatred, division, and blame were the usual outcomes of big epidemics across time and space and that such violence was directed against the poor and the marginal. Such notions go back at least to the Danish–German statesman and authority on antiquity Barthold Georg Niebuhr, who in 1816 proclaimed ‘Times of plague are always those in which the bestial and diabolical side of human nature gains the upper hand.’<sup>1</sup> With the outbreak of AIDS in the 1980s and into the twenty-first century similar assertions became common from scholars across disciplines and periods of history. According to Carlo Ginzburg, ‘the prodigious trauma of great pestilences intensified the search for a scapegoat on which fears, hatreds and tension ... could be discharged’.<sup>2</sup> Dorothy Nelkin and Sander Gilman claimed that ‘Blaming has always been a means to make mysterious and devastating diseases comprehensible.’<sup>3</sup> Roy Porter concurred with Susan Sontag: ‘deadly diseases’ especially when ‘there is no cure to hand’ and the ‘aetiology ... is obscure ... spawn sinister connotations’.<sup>4</sup> Recently, from earthquake-wrecked, cholera-hit Haiti, physician,

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anthropologist, and Harvard ‘University Professor’ Paul Farmer concluded ‘Blame was, after all, a calling card of all transnational epidemics.’<sup>5</sup> These trans-historical judgments, however, have relied on at best a handful of examples, which include the Black Death, the Great Pox of the sixteenth century, several cholera riots of the nineteenth century, and AIDS, centered almost entirely on the US experience. Moreover, an untested and vague chronology is implicit in these pronouncements. Epidemics’ power to provoke blame and hate occurred when diseases were mysterious, without tested cures readily at hand. Before the laboratory revolution of the 1870s, almost all life-threatening diseases were mysterious without effective cures, and therefore epidemics in antiquity, the Middle Ages, and early modern period would by this reasoning have been the ones to spur violence, division, and blame. A survey of epidemics in past time finds this was not the case. The Black Death of 1347–1351 was the colossal exception, not the rule, and failed to set in motion a new trend of disease-fueled persecution and hatred against Jews, beggars, the poor, or other ‘others’. Instead, modernity, with the eruption and spread of cholera in the 1830s, initiated a new hate–disease nexus.<sup>6</sup>

Even in the nineteenth and twentieth centuries, however, epidemics’ tendencies to spur hatred and blame were limited to certain diseases. The most prevalent ones were cholera, smallpox, and plague, and all three continued to spark violence after their mysteries of transmission had been mostly dispelled and often with basic preventive measures in place. Moreover, the three did not spawn the same mythologies or conspiracy theories, nor were the alignments of perpetrators and their targets the same. Despite occurring over widely diverse political, social, and economic regimes, cholera provoked riots from democratic Manchester and New York City across Europe and into Asiatic Russia during its first pan-European tour of the 1830s. Consistently, the targets of violence were not the impoverished, the marginal, or victims of the disease, but rather agents of the state from the police to mayors, regional governors, even counts, while the perpetrators were the impoverished or minorities as with newly arrived Irish Catholic laborers, the unemployed, and women in Glasgow, Liverpool, and London, or tribal Sarts in Tashkent.

Cholera’s abiding myth saw the medical profession in collusion with the state inventing the new disease to cull populations of the poor. Across cities, towns, and villages in Europe during the 1830s, and in Italy and Russia until 1911, the friends and neighbors of cholera victims stormed hospitals to ‘liberate’ their loved ones from what the

impoverished believed was the deadly clutches of doctors. In contrast to smallpox's social violence, where fear of contagion caused individuals to flee and crowds to assault, even murder, the victims of the disease, cholera rioters paraded on their shoulders the dangerously ill triumphantly back to their homes.

For plague, the class differences between perpetrators and victims were more variable and complex along with the underlying motivations and forms of protest. Before turning to these differences and complexities, let us sketch some similarities. First, rituals around burial and care of the corpse often sparked conflict between health authorities and the bereaved with cholera, plague, and recently with Ebola (Ebola virus disease, EVD) in West Africa, when indigenous communities attacked doctors, the Red Cross, journalists, and local authorities.<sup>7</sup> This should not be assumed as a universal response even from diseases that often tended to inflict violence and hate. With well over a hundred violent incidents (small-scale riots along with ones lasting months) connected with smallpox, mostly between 1880 and 1910, I have found only three to have even touched issues of funerary or burial practice and none to have concerned violations to the corpse.<sup>8</sup> For smallpox, the illness could linger on for months before death or recovery (not counting the lifetime scars), and lethality rates, even during severe epidemics, never exceeded 50% in Europe or the Americas by the nineteenth century. By contrast, the three other diseases were quick killers of a week or less and with cholera often within twenty-four hours, and the lethality rates of all three usually exceeded 50%. Because of these characteristics, the cries of protesting crowds from cholera in the 1830s to EVD in 2014 were much the same: 'if the people come in [the hospital], they don't leave alive'.<sup>9</sup>

With cholera, plague, and EVD, health officials saw the traditional washing, ritual handling of the corpse, and sitting with it through night-long vigils as a principal conduit of these diseases' spread. Therefore, without negotiation, they prohibited inhabitants performing traditional funerary rites and forced loved ones to bury the afflicted outside towns in newly constructed graves. Infringements of the Irish wake sparked cholera riots in Sligo, Dublin, Liverpool, New York City, and other places.<sup>10</sup> For instance, in July 1832 in New York City, at 15 James Slip, authorities demanded an end to a tenement's sitting and drinking with a cholera corpse and sent health officials for the corpse's immediate removal. A 'mob' of 300 assembled and prevented the officers entering the house.<sup>11</sup>

Suspicious over live burials, other ‘diabolical’ practices against proper burials, and violations of the corpse sparked more cholera riots across Europe. As with authorities’ disdain for the wake, these riots stemmed from forced removal of cholera corpses and authorities’ insistence that the bodies be interred rapidly and outside traditional churchyards. At Greenock on the Clyde estuary in Scotland, a fourteen-year-old boy died shortly after being taken to the town’s cholera hospital. Rumors spread that he had been killed in the hospital. After the post mortem, ‘an immense crowd’ of women and boys pursued his doctor, hooting and pelting him. They claimed that at night the boy had been buried at the top of a hill at the back of town and not given a proper Christian burial in the family’s cemetery.<sup>12</sup>

Concerns over burial could rouse much larger crowds as in London’s East End in 1832, when rumors spread of a cholera victim, a woman vendor of oysters, having been buried alive. A crowd assembled at the Commercial Road hospital and followed her procession to the Stepney church, alleging she was alive. The curate replied that ‘he did not care’, exasperating the crowd to violence and to demand exhuming the grave. An inspector with ‘a strong body of police’ arrived and ‘prudently’ allowed the people to proceed. Despite the opening of the coffin and the woman shown to be dead, ‘the multitude’, amounting to ‘at least 2000’, threatened to pull down the houses of the curate and sexton.<sup>13</sup> Similar riots turning on beliefs of cholera victims buried alive followed funeral processions in Birmingham, Bristol, Exeter, and Wick, with clergy, forced to pry open caskets, exposing fresh cholera corpses to the public.<sup>14</sup>

Rumors of physicians dissecting bodily parts of cholera victims, dead or alive, fueled further crowds to assemble in the thousands, demanding caskets to be opened and graves exhumed. Most infamous of these was probably England’s largest cholera riot in Manchester in early September 1832. Several thousands marched through the city’s streets, claiming that surgeons had been engaged in hideous crimes. This time the exhumation justified their fears. In the casket of a five-year-old cholera victim from a poor Irish family, the crowd discovered only the boy’s torso. Convinced the child had been healthy when removed to the hospital and that the doctors had murdered him, they marched on the hospital with cries to tear it down. Once arrived, they evacuated the patients, broke the windows and ‘every’ piece of furniture ‘they could lay their hands upon’, and destroyed the hospital’s ‘new spring vehicles’ for removing cholera patients. It was England’s only cholera riot to require military

intervention and threatened a reading of the Riot Act. Nine ringleaders were imprisoned—‘chiefly Irishmen’. However, this riot was a rare case in which medical authorities admitted that a protest rested on more than ‘superstition and ignorance’. The next day, the chair of the Health Board published an apology to Manchester’s inhabitants and promised that relatives and friends of cholera patients could visit the cholera hospital, and, if the patient died, could witness the body placed in the coffin and attend the funeral.<sup>15</sup>

Cholera riots in the British Isles in 1832 possessed a particular cause not seen elsewhere. In the 1820s, the opening of new anatomy colleges demanded the supply of large numbers of cadavers to train a new generation of surgeons. High-profile cases, most infamously Edinburgh’s trial of William Burke and William Hare, who murdered sixteen people in ten months to supply corpses for Dr. Robert Knox’s anatomy lectures, were publicized across Britain. Other incidents emerged in Liverpool and Dublin.<sup>16</sup> As a result, a new working-class slang term emerged that became widely used in riots resulting from Britain’s first outbreaks of cholera in November 1831: ‘to burke’, ‘burking’, and ‘burker’. The poorer British and Irish populations, in addition to fearing that the state and medical profession had invented a new disease to cull them, as seen across Europe, attacked hospitals, destroyed equipment, and threatened physicians’ lives because of the growing appetites of anatomy schools for fresh cadavers.<sup>17</sup> This fear of tampering with corpses and the centrality of the graveyard is seen most graphically in Paisley at the end of March 1832, when boys discovered the tools of grave snatchers. A crowd ‘consisting almost entirely of half-grown lads and Irishmen’ marched to the cemetery and disinterred graves. Discovering an empty one, they processed with it through town, attacked the hospital, broke its windows and those of all the surgeon’s houses in town,<sup>18</sup> because, they chanted, the sick had been ‘carried away to be dissected’.<sup>19</sup>

### CONTINENTAL EUROPE

Riots elsewhere in Europe followed similar patterns with fears of physicians under orders from secular authorities purposely poisoning cholera victims, despite the absence of any demand to supply cadavers for anatomy schools. With cholera raging through Paris in 1832, crowds attacked verbally and physically numerous physicians and murdered a medical assistant by drowning him in the Seine.<sup>20</sup> According to an

eyewitness correspondent of a US medical journal, ‘the Paris mob’ imagined physicians in all the hospitals ‘engaged in the combination to poison the people, because few patients came out alive’.<sup>21</sup> With the spread of cholera through Spain in 1834, rumors of intentional poisoning of wells and fountains spurred vicious assaults on friaries and monasteries. But here, the clergy, not physicians, were the prime targets, with as many as fifty friars slaughtered in one monastery alone in Madrid.<sup>22</sup> Similar attacks against religious orders occurred in Zaragoza, Murcia, Reus, and Barcelona.<sup>23</sup> Other suspected poisoners included a ten-year-old boy with a small vessel in his hand at the fountain of Avapies, two cigar manufacturers, and a young man arrested for poisoning the fountains at the Puerta del Sol, beaten to a pulp by the quarter’s residents before he reached the police station.<sup>24</sup>

In Sicily, where the spread of cholera was held at bay until 1836, peasants, workers at Siracusa and Catania, accompanied by some from the intelligentsia, revived early modern mythologies of intentional plague spreaders—the *untori*. The butts of their cries were large property holders and especially officials of the Bourbon monarchy, including mayors, chief justices, and the police. Archives were destroyed and town halls burnt to the ground. These attacks proved more deadly than those in Britain, the USA, France, or possibly anywhere else in Europe. For one valley alone, Valle Minore, southeast of Palermo, 650 were sentenced for rebellion, and the crowds killed at least eighty.<sup>25</sup>

These rumors of intentional poisoning and live burials, provoked in part by government prohibitions over traditional burial and funerary practices, continued in many parts of Europe through the last decades of the nineteenth century and in Italy and Russia into the twentieth. As in the 1830s the rioters’ targets were not the poor or marginal; instead, they were the perpetrators of violence with the blame falling on medical officials and agents of the state. In the Congress of Poland during the fifth cholera wave of the 1890s, even Jews could lead the rioters and propagate the myths of health officials poisoning or burying the poor alive. The coachman of a sanitary party, a Jew named Abraham Migdal, spread rumors that officials arriving at Łysobyki to perform anti-cholera measures had previously been chased from another town because they had poisoned the sick and had buried them alive. A ‘mob’ assembled, threw stones, and tried to knock down the doors of an inn, where the sanitary party was staying. Seven ringleaders were arrested, including the coachman.<sup>26</sup> During the same cholera wave in Hungary, peasants in

Kiszacs, near Neusatz, rioted after cholera patients had been removed to cholera hospitals.<sup>27</sup> The village assembled and insisted that an autopsy of a cholera victim not be performed. Such acts, the villagers believed, violated the body and thereby would bring hailstorms to destroy their crops. Armed with scythes and pitchforks, the peasants appear to have won: the authorities buried the victim's body without a post-mortem examination.<sup>28</sup> Enforced removals to cholera hospitals and burials in new cholera cemeteries sparked riots of as many as 30,000 in cities and villages down the Volga and into the Crimea as in the districts of Saratov and Astrakhan.<sup>29</sup> At Hughesofka [Hughesovka, also called Youzova, now Donetsk in the Ukraine], the cholera rioters burnt down the town, 'every house reduced to ashes, including even the church'.<sup>30</sup>

During Naples' most disastrous cholera epidemic in 1884, rumors circulating among 'the lower classes' showed the mythologies of the 1830s well and alive: 'the people believed that doctors received 20 lire (then, \$4) for every cholera patient who died under their care and when the number reached a thousand, the doctor could retire with a life pension'.<sup>31</sup> A recovering patient mistakenly thought to have died from cholera and dumped in a funeral cart ignited the *popolo's* (the non-elites') anger. They rioted, chanting 'See how they [the health authorities] come and take the living.' Cholera riots in the small Pugliese cathedral town of Ostuni illustrate the continuity in attitudes and the state's recalcitrance in imposing funerary and burial restrictions, which continued triggering cholera riots from 1837 to Italy's last major cholera wave in 1910–1911. Seeing their relatives unceremoniously thrown into ditches of newly created cholera grounds outside town in 1837, Ostuni's *popolo* shouted they would not tolerate it and rioted.<sup>32</sup> History repeated itself. By 1910, however, the crowd's size and the extent of the violence increased. Municipal authorities continued to prohibit *il popolo* from performing their traditional burial rites, visiting afflicted friends and relations, and observing victims' cadavers before burial, while the town's elites were allowed to bury their cholera-stricken in traditional ecclesiastical grounds. Such class-based unfairness intensified popular fears of doctors, backed by the state, murdering the infected. In mid-November 1910, 3000 from the town's poorest neighborhoods wrecked the cholera hospital, 'liberated the patients', burnt down the town hall and offices of the health department, attacked health workers, stoned *carabinieri* (members of the police force), destroyed doctors' homes, and took possession of the town square.<sup>33</sup>

Such impositions over funerary practices and fears of corpses violated during cholera epidemics were not unique to Europe. Two cholera riots, one in Turkey, the other at Cairo, hinged on health authorities violating Muslim burial customs. In December 1893, treatment of cholera patients in the hospital and neglect of Muslim burial rites offended the ‘Softias’ (religious students), who held meetings and posted placards on the walls of the Mosque at Istanbul, ‘urging the faithful to take notice of the scandalous manner in which the Mussulman dead were interred’.<sup>34</sup> Two-and-a-half years later, similar plague measures provoked another student uprising, this one ‘at the Great Moslem University Mosque of El Ashar [Cairo]’.<sup>35</sup> When the Governor of Cairo entered the university to enforce regulations of the dead, the rioters showered his party with stones, wounding the governor and maltreating other officials. Reinforcements arrived; the students resisted, and the police fired on the crowd, killing the principal leaders, wounding others, and arresting 120.<sup>36</sup>

Finally, in 1897, in Tokyo, inhabitants saw the same pattern with cholera as had Europeans: few returned alive from the cholera hospitals. Rumors spread of doctors draining blood from patients and plucking out their eyes, and of patients put in coffins alive and sent to the incinerator. A story circulated that former US President Ulysses S. Grant came to Tokyo to procure the liver of a Japanese cholera victim. As in Europe, such stories sparked ‘violent riots’ and required military intervention.<sup>37</sup>

### COMPARISONS: WHY THE DISEASE MATTERS

Given recent assessments of epidemics’ supposed impact on popular imagination, rousing hatred and blame regardless of the disease, these reactions to cholera may not strike us as strange. Yet, despite the similarity of cholera revolts across strikingly different political, social, and cultural regimes—the alignment of the perpetrators of violence and their targets, myths of doctors employing the disease to cull populations of the poor—scholars of cholera have pinned cholera’s violent reactions to particular national contexts as with the demand for cadavers to supply new anatomy schools in Britain, the new anxieties provoked by the July Monarchy’s coming to power in France,<sup>38</sup> and the brutal repression and quarantine regulations in Russia and Eastern Europe.<sup>39</sup> However, immediately before or after the cholera revolts of the 1830s, other epidemics scored even higher mortalities in these same political and cultural

environments. For instance, closer to the July Monarchy in 1830, an epidemic of influenza killed more in Paris than cholera two years later.<sup>40</sup> And from 1831 to 1833, typhus spread through the capital, but neither disease registered any popular movements, riots, or suspicions of poisoning as seen in newspapers or other sources. Similarly, in 1826 a typhus epidemic raged through the British Isles, massacring 70,000 in Ireland and 20,000 in London alone.<sup>41</sup> But British and Irish newspapers do not report a single typhus riot or suspicions of poisoning, hospitals as death chambers, or fears of the medical profession harvesting corpses for the new anatomy schools. Similarly, 1892 may have produced the most extensive cholera rioting in Russian history, spreading from Asiatic towns through the Volga basin into Syria and Eastern Europe and with crowds estimated between 10,000 and 30,000 at Astrakhan and five to ten thousand at Tashkent.<sup>42</sup> Arrests, injuries, and executions numbered in the hundreds and, as we have seen, a major industrial town was burnt to the ground. Yet in that same year, epidemics of typhus and plague also swept through the Volga basin and the Crimea—the epicenter of cholera and its revolts since 1830—without a hint of civil unrest or rumors of poisoning.

### SMALLPOX

Diseases such as influenza, even the great and mysterious one of 1918–1920, fail to produce rioting or social violence towards its victims or to supposed carriers, despite its rapid contagion.<sup>43</sup> Moreover, diseases that could spread hate and blame did not turn on the same mythologies spawned by cholera. The disease to create the greatest social violence in US and Canadian history was not cholera, as in Europe, but smallpox. Smallpox, moreover, better fits the received picture of epidemics igniting hate and blame against the poor, minorities, and supposed carriers of the disease. During a smallpox epidemic in 1894, ‘a mob’ at Miles Switch, near Eldorado, Arkansas, for instance, burnt down a pesthouse, where a doctor had isolated ‘a negro’ ill with smallpox, cremating the victim.<sup>44</sup> Five years later, at Bessemer, Alabama, at night a mob composed of propertied farmers ‘riddled the pesthouse with bullets’, then justified their action ‘as the best and quickest means of ridding themselves of its [smallpox’s] presence’.<sup>45</sup> Similar actions were taken against ‘tramps’ in Midwestern and Northern towns and against the Chinese in Western States.<sup>46</sup> In addition, smallpox epidemics in the USA and Canada could spark riots lasting weeks that assembled crowds in the thousands at Montreal in 1885, Chicago in 1894, Milwaukee a month later, and Turtle

Creek, Pennsylvania, in 1900.<sup>47</sup> At least another fifty occurred from the 1880s to 1920 with crowds numbering in the hundreds.<sup>48</sup> Yet none of these incidents raised any questions about funerals, burial rights, suspicions of tampering with corpses, or rumors of poisoning or victims buried alive. Instead, fears of contagion emanating from the poor or outsiders—Bohemians, Chinese, ‘negroes’, and ‘tramps’—provided the spark. In no case did friends or families of smallpox victims storm hospitals ‘to liberate’ the afflicted or proudly parade them home on shoulders.

### PLAGUE OF THE ‘THIRD PANDEMIC’

At the end of the nineteenth century, the social violence of another disease of epidemic force could hinge on questions of burial, funerary rites, and fears of the medical profession violating the corpses of the beloved—bubonic plague. As with cholera before rehydration interventions in the twentieth century or EVD recently in West Africa, bubonic plague before antibiotics possessed unusually high lethality rates, and, in pneumonic and septicemic forms, death was certain. As a consequence, cries from afflicted communities could resemble those of cholera and EVD. In one of the earliest plague riots in India, just weeks after the disease entered Mumbai in 1896, a thousand mill hands assembled in front of the plague hospital in Arthur Road demanding the release of a female co-worker whom they judged as having been ‘healthy and innocent’. They tried to destroy the hospital and liberate the inmates, claiming that ‘not a single patient’ had returned from the hospital alive, therefore something ‘diabolic’ about it must have ‘claimed so many victims’.<sup>49</sup> Four years later, the *New York Times* reported ‘serious riots and disturbances, arising from plague prevention’ in the region of Simla (in the modern state of Himachal Pradesh), explaining that ‘the people’ were convinced that government doctors had been ordered to poison patients. Reminiscent of cholera in Europe, ‘the people’ came to this conclusion because ‘no one who goes to a Government plague hospital ever comes out alive’.<sup>50</sup>

Similar to cholera, but in contrast to most other epidemic diseases, authorities’ interferences with funerals could provoke protest and violence. At Rander in the Surat district, plague legislation in 1897 limited funeral attendance to fifteen and forced victims to be buried in new cemeteries outside the city, despite any evidence of the disease being spread

during these gatherings. Three thousand Muslims protested against these violations to their traditional funerary rites by joining a funeral procession of a plague victim and carrying the body to their sacred cemetery (at their mosque) in the center of town. Twelve protesters were arrested, but mass violence was averted. However, the protest continued the next day with ‘still more Moslems’ assembling in their mosques and closing their businesses to oppose the funerary limit.<sup>51</sup> As with many other peaceful demonstrations against plague measures, the international press did not report this one, despite the exceptionally large number of protesters. Yet the Indian press reported similar protests against colonial plague measures, provoked by governmental violations of traditional burial and funerary rites, as in early March 1897, when ‘a large meeting of the Mohamedans of Surat’ met to oppose the new and unannounced practices of burying plague victims with quicklime and preventing relatives from reciting funeral prayers over the dead body.<sup>52</sup>

Again, similar to cholera but unlike most other epidemic diseases, plague provoked rumors of health authorities engaged in ghoulish dissection of plague victims, dead and alive. With the early plague revolt at Mumbai’s Arthur Road hospital mentioned above, mill workers (according to the press) pinned the loss of so many lives to doctors draining blood from victims’ feet.<sup>53</sup> When plague spread the following year to smaller towns further north, such rumors became more elaborate. Papers sympathetic to the government claimed that ‘the ignorant townsfolk in the *mofussil* [Hindi for the sticks] believe that the livers of all patients sent to segregation wards were...sent to Bombay for suppressing the plague in that city’.<sup>54</sup> Later, another native paper argued that the uneducated believed doctors were poisoning plague patients with ‘six bags of snakes and other poisonous worms’ ground and dissolved in the pipe-water to bring on plague. It concluded that ‘India is a land of superstitions and false beliefs’ and that the fault of the riots had not rested with educated Indians—instead, the culprit was ‘king Mob [which] is impervious to reason’.<sup>55</sup>

Similar messages come from China’s early history with the plague’s ‘Third Pandemic’. With its return at Shanghai in 1910, the English-language paper the *North China Herald* asserted that the Chinese believed that those taken to the Isolation Hospital were ‘at once exterminated’ and that such beliefs arose from authorities refusing to send the bodies to relatives for proper burial.<sup>56</sup> A week later, the same paper maintained that those from ‘the better classes of the Chinese’ were ‘as

gullible as the most ignorant coolies'. According to them, the municipal council seized women and children and forced them into the Isolation Hospital, 'whence they never emerge alive'. It alleged children were killed, either for production of vaccines or to light electric lamps.<sup>57</sup> Later, it was said that children had been kidnapped 'to take their eyes and hearts to manufacture medicines to treat foreigners' then infected by plague in Manchuria.<sup>58</sup> But, unlike European cholera riots, this one showed solidarity across class lines, at least within the Chinese community, and achieved political objectives. As a result of their protests and unified front, the Chinese representatives implemented significant modifications in the Council's proposed plague measures. The Chinese press celebrated the changes as a 'popular nationalist victory'.<sup>59</sup>

In terms of the number of plague riots and the size of the crowds, India was the exception. In Europe, disturbances occurred only at Vienna, Madeira, and Oporto. Except at Madeira, none of these could be called riots. At Vienna, the outcry was contained to the anti-Semitic press. Only at Oporto did rumors similar to those during Europe's cholera past (and in Italy and Russia, also its future) initially flare. On 21 August, the 'popular classes' accused Dr. Ricardo Jorge, Chief Medical Officer of Portugal, who declared Oporto under siege by plague, 'of inventing the plague' by injecting the poor with the bacillus.<sup>60</sup> Unlike with cholera, however, no major riots followed. Instead, middle-class and business leaders, fearing quarantine's economic consequences, quickly took over the protest. Shopkeepers closed their stores and businessmen assembled with placards in front of the stock market, protesting the national government's quarantine of Oporto.<sup>61</sup> None of the European disturbances turned on fears of diabolic dissection or threats to burial customs.

Even in India, the plague disturbances were short lived, clustering in the years 1896–1901 and disappearing before plague mortalities reached their peaks towards the end of the first decade and into the second of the twentieth century. More importantly, the Indian plague protests differed from the bulk of Europe's long history of cholera riots of the 1830s to the twentieth century: mythologies of hospitals and the medical profession poisoning, burying alive, and maliciously dissecting corpses of the poor were not the rule in India. Instead, Indian protesters rallied to combat concrete injustices and the incompetence of authorities. Studiously, Indian citizens, even mill workers, drafted demands and resolutions.<sup>62</sup> These focused on a wide range of humiliating and damaging practices:

careless segregation of the healthy with the plague stricken; prison conditions and inadequate lodging in plague camps; detention centers with starvation levels of provisioning; harassment of passengers with ineffectual and humiliating body searches at railway stations; indifference or hostility to religious customs with destruction of shrines and violation of sacred spaces; insults and abuse from police, search parties, and plague commissioners; military pre-dawn strip examinations in public places; destruction of homes, especially those of the poor; and a general milieu of arrogance, corruption, and blackmail on the part of sanitary, state, and municipal officials.<sup>63</sup> Concerns over the corpse or burial were not central to these plague protests, and, as seen above with violations to funerary practices and processions and which will be seen below with complaints about corpses, the Indian outcries turned in directions that differed radically from those of cholera. The following sections investigate further the composition, character, and efficacy of Indian plague revolt, exposing differences between Europe's experience with cholera violence and India's with plague.

Unlike cholera myths, the accusations drawn by the native intelligentsia as well as those rioting against the 'tyranny' of anti-plague operations drew on documented evidence. In summarizing the events at Pune that led to the assassination of Lieutenant Ayerst and Pune's first Plague Commissioner, Walter C. Rand, in the summer of 1897, a newspaper of Western Australia reported the complaints of the native population as if they were myths: 'The troops are accused of outraging women, insulting the religion of the natives and of general plundering.'<sup>64</sup> But from case reports documented in native papers, such malpractices were proven not to have been crazed figments of imagination but rather the government's standard operating procedures. Eventually, the international press, followed by colonial authorities, began to recognize that these complaints were grounded in realities.<sup>65</sup> The *Guardian* cited approvingly Pune's *Mahratta*, that no measure undertaken by the colonial government 'has interfered so largely and in such a systematic way with the domestic, social and religious habits of the people as has the rigorous enforcement of the measures adopted for stamping out the plague'.<sup>66</sup> Even papers such as the *Scotsman*, which attributed Cawnpore's violence in 1900 (Cawnpore is today's Kanpur) to 'the wildest rumours', also conceded that sanitation measures had been carried out with 'too much zeal'.<sup>67</sup>

Soon at Mumbai and eventually throughout the subcontinent, municipal and colonial governments admitted that plague searches had been

abusive and their ignorance of local customs was a reality to their detriment. They drafted policies and practices accordingly, reforming house inspections, allowing relatives to visit plague patients, limiting the military in anti-plague operations, and permitting segregation to occur in private homes and caste hospitals.<sup>68</sup> In the immediate aftermath of Mumbai's Julai riot in March 1898, the government began reforming its plague policies after a year of petitions and peaceful assemblies had failed to move Lord Sandhurst, Governor of the Presidency of Bombay. Less than a week after the riots, he reformed the registration of deaths, which especially offended Hindus by allowing strangers to touch their corpses. Besides, the keeping of bodies lying in homes through hot summer months had created serious health risks. He even made changes to a policy whose history of native complaint stretched back to India's plague origins—that of soldiers composing plague search parties. Shortly afterwards, by disbanding the Bombay Plague Committee, Sandhurst enacted a major constitutional change. Native papers had claimed that this committee's regulations, abusive enforcement, and incompetence had been a major cause of the recent riots.<sup>69</sup> Others charged the committee not only with indifference and an 'unsympathetic attitude' towards rich and poor alike but also of 'stupidity'.<sup>70</sup> Even the usually pro-government *Indian Spectator* condemned the committee, not only because of its abuses but for the policies themselves 'as purposeless interference'.<sup>71</sup> These riots emboldened native papers to risk firing further barbs against the committee, charging it with past acts of incompetence and accusing its plague hospitals as 'mismanaged' and 'more miserable than cattle-sheds'.<sup>72</sup> Others pointed to the government's vast expenditures that had brought the municipal government to the brink of bankruptcy. These criticisms mounted into June, when, finally, Lord Sandhurst devolved plague control back to Mumbai's municipal corporation.<sup>73</sup>

### COMMUNITY SOLIDARITY

In contrast to cholera riots, which showed a clear class alignment between recently arrived immigrant workers, the unemployed, and marginal groups opposing government officials and the medical profession, plague revolts in India often presented a united front, especially after the Julai revolt. Then, all the papers, regardless of language or religious orientation, spoke with a single voice. After preambles condemning fanaticism, and acts of violence 'repugnant to law' in order to pass through

British censorship, these papers turned swiftly to what they considered the principal causes of the Julai violence: working-class residents of the impoverished Madanpura district had only 'indirectly' caused it.<sup>74</sup> Signs of the deeper causes had been apparent for at least a month.<sup>75</sup> The *Gujarāti* claimed it had been 'the talk of the town', but, because of fears of governmental reprisals, the Indian papers had not recorded it.<sup>76</sup> But after the riots, even the *Indian Spectator* pointed to the long-term policies and practices of anti-plague defenses as the riots' cause, accusing the government's 'servitors' of rushing into private houses when the male members were away, 'pestering patients down with ordinary ailments ... frightening their relatives', threatening to carry off patients, catching hold of the poor in the streets and elsewhere, thrusting the thermometer into their mouths, wantonly destroying property. It charged that 'these and other complaints, to say nothing of petty corruption' had 'filled the air for weeks'.<sup>77</sup>

The *Champion* fixed the blame squarely on the Bombay Plague Committee and the constitutional arrangement that had given it so much authority. It argued that 'no real peace' was possible until Lord Sandhurst dismissed the committee and placed power in the hands of the Municipality, 'which would be in touch with the people'.<sup>78</sup> The *Mabrāṭta* called the Committee the 'author' of the riots. The Julais had not been the only ones 'aggrieved': the 'real cause' lay in the oppression generated by the Committee's policies and it became 'shared by the public generally'.<sup>79</sup> The Gujarati newspaper *Kaiser-I-Hind* pointed to 'the method and manner' in which the committee had performed its operations. Discontent was not the Julai's alone: 'everywhere in the Native town' cries of '*zulum*' [tyranny], scandal and corruption, 'including blackmail' were heard.<sup>80</sup> The Anglo-Marathi *Indu Prakāsh* charged that the cause reached higher than the committee, implying it rested with Sandhurst, although given the reprisals against newspapers after the 'Poona Tragedy' in 1897 the paper was not so foolish to make the charge directly.<sup>81</sup> Other papers stressed that the hapless medical student's order to examine the Julai girl was only the tip of iceberg: general discontent stretched across Indian society, by class and religion, and had been mounting for some time. The real causes rested with colonial policy.<sup>82</sup>

After Sandhurst's about-face, papers continued blasting him for having refused to negotiate earlier with 'the people of Bombay'.<sup>83</sup> By April, others followed suit, with the *Hindu Punch* crying 'The Government

will do nothing voluntarily.' To redress their grievance, the people will have 'to make a stir'.<sup>84</sup> Now, instead of castigating the rioters as the 'ignorant' poor, papers praised them: the 'lawlessness and violence' of 'the ignorant and *budmash* [hooligan] element' had brought 'the Government to reason'. The efforts of 'their wiser brethren' (i.e. intellectuals and journalists) with their 'milder remedies' of persuasion and reform had failed.<sup>85</sup> By mid-June, some members of government concurred. A report by Mumbai's Police commissioner, Mr. R.H. Vincent, concluded that the Bombay Plague Committee's claims that the riots had been instigated by outsiders and Brahmins were false. Instead, they reflected the

universal discontent then prevailing among all classes of the city ... The responsibility ... rests more with the plague regime of the day, with its unwillingness to show sympathy with the people and inability to read the signs of the times, than with the bellicose tendencies of the *budmash* element of the city.<sup>86</sup>

Native papers put it bluntly: 'the unpopularity of the plague measures were the sole cause of the riots, and plague authorities were to blame'.<sup>87</sup> It took 'the roughs of the Muhammadan community' to 'rouse the absent-minded Government to do its duty'.<sup>88</sup> The vast majority of cholera riots show no hints of any community solidarity.

### CLASS AND CULTURAL UNITY BEYOND MUMBAI

More than claims of blood drained from patients' feet, livers dissected for cures, or rare references to fears of doctors' poisons, plague protest in India confronted concrete excesses and abuses of power.<sup>89</sup> Their political motives to challenge government abuses and incompetence and to be recognized as citizens, essential in their own plague defense, recur as the dominant motives of plague riots from Mysore to the foothills of the Himalayas. These concerns united lower and upper classes, cut across castes, and temporarily fused sympathies between the subcontinent's two major religions, even if middling and upper classes may not have condoned the street violence and hooliganism that ensued after their own petitions and resolutions agreed upon in large town assemblies had failed.<sup>90</sup> Such a consensus was not exclusive to Pune or Mumbai. In another part of the country, at Hyderabad, 'a monster meeting' united

Hindus and Muslims of all denominations, 'high and low', to oppose compulsory segregation on the grounds that the practice violated their religious rites and social customs.<sup>91</sup>

In few cholera riots or protests had any hint of a united front been achieved, except perhaps for brief moments, as during the morning of Madrid's Puerta del Sol protests on 20 June 1885 before bourgeois café-goers retreated, or at moments in Siracusa and Catania during the Sicilian cholera riots of 1837.<sup>92</sup> Instead, from the 1830s to the twentieth century, cholera riots ripped societies asunder, dredging deep trenches along class lines, yet failing to unite various strata or occupations of the working class as plague riots and strikes achieved in India.<sup>93</sup> No doubt the Indian unity explains much of the Indian rioters' successes and why, unlike cholera's, theirs lasted only several years, vanishing before plague's climax around 1907 or in Punjab a decade later. Except momentarily, in such places as Calcutta in 1898 and 1899, once governments modified their policies, the riots declined.<sup>94</sup> With deep-seated fears based largely on imaginary forces with cholera frenzy, such adjustments in policy would have proven a less plausible antidote. Discoveries of cholera's epidemiology and pathology, better preventive measures, and physicians' more effective cures failed to dampen cholera fantasies, class hatred, and violence against hospitals, doctors, and government officials everywhere. In countries such as Russia and Italy (even in northern cities), they endured into the twentieth century.<sup>95</sup>

Instead of the usual key words found to describe the rioters in Europe with cholera—the ignorant, superstitious, and uncivilized—the press on occasion characterized the Indian plague 'conspirators' by the opposite, as ones with the 'brains'. In an editorial comparing the origins of the plague riots in India with the Sepoy Mutiny of 1857, an Australian paper attributed 'the trouble' of both to the 'Brahims': 'They were,' as one authority says, 'fanatical, and they had the brains to contrive mischief when discontented'.<sup>96</sup> In none of the Indian riots were crowds described as the marginal, recent immigrants, or 'untouchables'. Instead, Indian rioters, even ones such Mumbai's on 9 March that engulfed one of the poorest quarters of the city, were described as 'caste men' or employed workers and artisans, 'Zulais or Musalman weavers'.<sup>97</sup> In fact, the Julai were among the highest-paid workers in Mumbai's cotton industry.<sup>98</sup>

To be sure, some papers at several moments pointed to the 'low-class element', that the 'the trouble' originated from 'the quarters of the low-class Hindoos and Mahammedans'.<sup>99</sup> Yet with the major plague riots,

upper- and middle-class resentment surfaced, first with peaceful protest—editorials, complaints to Plague Commissioners, petitions, and resolutions to reform plague measures in municipal assemblies. Second, a principal criticism against anti-plague measures was an elitist one that derived from the upper castes, especially Brahmins: removal to the segregation camps forced them to mix with other religious groups and, worse, with lower castes, violating their ‘caste prejudices and religious susceptibilities’. Native papers complained that it was ‘rather queer that the authorities should make no distinction in this respect between the well-to-do classes’ who could afford isolation in their own houses ‘and the low unprotected who could not’.<sup>100</sup> Why should natives ‘who excel the Europeans in dress, cleanliness etc. ... be subjected to the same treatment as the low-caste and dirty people?’<sup>101</sup> And in at least one riot, at the village of Sávli in the Baroda State, a mob of nearly a hundred harassed a plague nurse, pelted the local judge (*Fonzdar*) and assistant plague commissioner with brickbats and stones, chased away the inmates of a plague camp and those at the village hospital, broke its furniture to pieces, and burnt the sheds housing the patients. It was comprised exclusively of Brahmins; fifty-eight were arrested.<sup>102</sup> Yet, no lower-caste resentment against this class prejudice is reported; no rallying of artisans, laborers, peasants, or out-castes championed the seeming equalitarianism of the colonial-imposed isolation camp.<sup>103</sup> Instead, unlike the great majority of cholera riots, Indian plague revolts were composed largely of labourers and artisans and often presented a united front from Brahmins and the intelligentsia of newspaper editors to day-laborers.<sup>104</sup> Finally, the composition of plague riots differed from cholera’s in another guise. The plague ones were not principally of marginal and impoverished women or ‘half-grown lads’, typical of cholera riots. While an examination of a girl may have sparked Mumbai’s largest riot, this and other plague uprisings appear composed of adult men, outraged (among other matters) by Europeans’ treatment of their women, insulting their masculinity and sense of decorum.

## CONCLUSION

Historians have yet to distinguish diseases in past time that tended to divide societies with violence and accusations of blame from those that brought communities together. The few to point to the characteristics of diseases believed to have incited blame and violence have not investigated the varieties of violence or the fault lines of division that some

epidemics have wrought.<sup>105</sup> Certainly, it was not always the ‘other’ or the victims of disease who were the butts of social violence, as has often been assumed. Diseases with high rates of lethality—cholera, plague, and EVD—were the ones most likely to spur suspicions and violence against government authorities and the medical profession. With these, the marginal and poor were the perpetrators, while governing elites and medical professionals were the targets of violence. These were the diseases that turned on funerary and burial restrictions and spread rumors of purposeful poisoners and ghoulish tales of dissected corpses with patients’ livers delivered for medicines to aid the wealthy or babies murdered for vaccines. On this score, the reactions to cholera in nineteenth and early twentieth centuries and plague in India at the end of the nineteenth century appear the same.<sup>106</sup> But there were profound differences between the two. The Indian plague protests were on the whole grounded in concrete cases of governmental abuses, corruption, and blackmail, and often had been preceded by town meetings, resolutions, and letters to editors and national officials. Instead of dividing communities, the Indian plague protests—whether violent riots or peaceful demonstrations—united often bitter enemies, as with Muslims and Hindus, and relied on documented evidence of governmental abuse rather than wild rumors in attempts to end their epidemics.

## NOTES

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3. Dorothy Nelkin and Sander Gilman, ‘Placing Blame for Devastating Disease’. *Social Research* LV (1988): 363. This article has had an authoritative impact on others investigating scapegoating with epidemics; see, for instance, Susan Craddock, *City of Plagues: Disease, Poverty, and Deviance in San Francisco* (Minneapolis, MN, 2000), p. 101; Myron Echenberg, *Black Death, White Medicine: Bubonic Plague and the Politics of Public Health in Colonial Senegal, 1914–1945* (Portsmouth NH, 2002), p. 130; William Eamon, ‘Cannibalism and Contagion: Framing Syphilis in Counter-Reformation Italy’. *Early Science and Medicine* iii (1998): 21.

4. Roy Porter, 'The Case of Consumption' in *Understanding Catastrophe*, ed. J. Bourriau (Cambridge, 1992), p. 179.
5. Paul Farmer with J. S. Mukherjee, *Haiti after the Earthquake* (New York, 2011), p. 191. Still more recently see Sonia Shah, *Pandemic: Tracking Contagions from Cholera to Ebola and Beyond* (New York, 2016), p. 116 and ch. 6. Similar remarks are easily found; for instance, Julia Irwin writes 'Throughout history, societies have created scapegoats ... the innocent ... to rationalize and explain the origins and course of disease outbreaks' ('Scapegoats and Epidemic Disease' in *Encyclopedia of Pestilence, Pandemics, and Plagues* vol. II, ed. Joseph P. Byrne (Westport CT and London, 2008), p. 618).
6. This survey and its conclusions are the backbone of Part I, Samuel Cohn, *Epidemics: Hate and Compassion from the Plague of Athens to AIDS* (Oxford University Press, forthcoming April, 2018).
7. For a survey of these incidents, see Samuel Cohn and Ruth Kutalek, 'Historical Parallels, Ebola and Cholera: Understanding Community Distrust and Social Violence with Epidemics'. *PLOS: Current Outbreaks* (26 January 2016).
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9. A. Nossiter, 'Fear of Ebola Breeds a Terror of Physicians', *New York Times* 27 July 2014. In a cholera riot at Wick in late July 1832 that targeted the town's cholera doctor, fishermen spread the rumor that none left the hospital under his care. 'Cholera and Alarming Riot at Wick, Caithness-shire', *Morning Post* 1 August 1832, from the *Edinburgh Evening Courant* and *Caledonian Mercury* 2 August 1832.
10. See Cohn, *Epidemics*, ch. 7.
11. 'Latest Cholera News', *Philadelphia Inquirer* 4 July 1832, p. 2; 'A Row', *Baltimore Gazette* 5 July 1832, p. 2, from the *New York Commercial Gazette and Daily Advertiser*; and 'Cholera Summary'. *Portsmouth Journal of Literature and Politics* 14 July 1832, front page.
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13. 'Cholera Riot', *Morning Post* 25 August 1832; and *The Scotsman* 29 August 1832, p. 2.
14. For these, see Cohn, *Epidemics*, ch. 7.
15. 'Attempt to Destroy the Cholera Hospital', *Morning Post* 7 September 1832.
16. See Cohn, *Epidemics*, ch. 7.
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- 'Cholera in London', *Caledonian Mercury* 5 April 1832; 'Cholera Riots in Liverpool', *Westmoreland Gazette* 9 June 1832, p. 3; 'Another Cholera Disturbance', *Morning Chronicle* 31 March 1832; Sean Burrell, 'The Irish Cholera Epidemic of 1831–1832: Riots, Catholicism and the Wake' in *Cholera & Conflict: 19th Century Cholera in Britain and its Social Consequences*, eds Michael Holland, Geoffrey Gill and Burrell (London, 2009), p. 230.
18. Numerous papers across Scotland and England covered these events; see Cohn, *Epidemics*, ch. 7.
  19. *The Scotsman* 28 March 1832, p. 3. Also, Ruth Richardson, *Death, Dissection and the Destitute*, 2nd ed. (London, 1988), pp. 223–226 describes the riot.
  20. Karine Salomé, 'Le massacre des "empoisonneurs" à Paris au temps du choléra (1832)'. *Revue Historique* 673 (2015): 103–124. Also, see *Le Figaro*, 10 April 1832, front page; Frank Snowden, *Naples in the Time of Cholera 1884–1911* (Cambridge, 1995), p. 151; and François Delaporte, *Disease and Civilization*, trans. A. Goldhammer (Cambridge, 1986), p. 66; Salomé, 'Le massacre', does not refer to the Seine murder, but cites other cases in Paris during the summer of 1832, when crowds blamed doctors for poisoning and threatened their lives: pp. 110, 111.
  21. *Cholera Gazette* 1:1–16 (1832): 85.
  22. 'The Late Disturbances in Madrid', *Observer* 3 August 1834, p. 4; *Pittsburgh Gazette* 4 September 1834, p. 2.
  23. Esteban Rodríguez Ocaña, *El cólera de 1834 en Granada: Enfermedad catatónica y crisis social* (Granada, 1983), pp. 123, 125.
  24. 'The Late Disturbances in Madrid', p. 4, translated from the *Madrid Gazette* (not dated).
  25. Alfonso Sansone, *Gli Avvenimenti del 1837 in Sicilia (con documenti ...)* (Palermo, 1890). Also, see Preto, *Epidemia, paura e politica nell'Italia moderna* (Bari, 1987), pp. 121–166 and *I moti del 1837 a Siracusa e la Sicilia degli anni trenta*, ed. Salvatore Russo (Caltanissetta, 1987).
  26. *Observer* 25 September 1892, p. 5.
  27. 'Cholera riots in Munich and Kiszares', *The Sun* 3 September 1892.
  28. 'A Cholera Riot', *Sheffield Daily Telegraph* 5 September 1892, p. 5; 'Report from Budapest, Kiszaces, near Neusatz', *Glasgow Herald* 5 September 1892, p. 7, among others.
  29. See note 42.
  30. 'The riots at Hughesofka', *The Scotsman* 27 August 1892, p. 7.
  31. 'The superstition of the lower classes in Italy', *San Francisco Chronicle* 12 October 1884, p. 4.
  32. Franco della Perutta, *Mazzini e i rivoluzionari italiani: Il partito d'azione 1830–1845* (Milan, 1974), pp. 265–266.

33. 'Particolari sui disordini di Ostuni', *La Stampa* 15 November 1910, front page; 'Il lazaretto e il municipio di Ostuni devastate dalla popolazione in preda a follia superstiziosa', *Corriere della Sera* 15 November 1910, p. 2; and 'I tumulti di Ostuni. "Processioni macabre. Ottana arresti"' 16 November 1910, p. 2.
34. 'Cholera in Turkey', *The Scotsman* 19 December 1893, p. 7: Reuter's from Vienna, 18 December.
35. *Le Temps* 5 October 1896, p. 2, The university was founded in 970 or 972 as a *madrasah* (center of Islamic study).
36. 'A Riot in Cairo', *The Scotsman* 2 June 1896, p. 6. *Le Temps* 5 October 1896, p. 2 counted 127 arrested and 'A Cholera Riot in Cairo', *New York Times* 2 June 1896 put it at 200; also see *New York Times* 3 June 1896, p. 8; *Pall Mall Gazette* 28 May 1896, 7–8; 'Riot in Cairo, Mob Fired On', *Coventry Evening Telegraph* 2 June 1896, p. 3.
37. Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley, 2004), p. 152.
38. Catherine Kudlick, *Cholera in Post-Revolutionary Paris: A Cultural History* (Berkeley, 1996). Also, Salomé, 'Le massacre', frames these Parisian reactions within the political context of July Monarchy and refers to no other countries' reactions (pp. 105, 118, 123).
39. Richard Evans, 'Epidemics and revolutions: cholera in nineteenth-century Europe', in *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*, eds Terence Ranger and Paul Slack (Cambridge, 1992), p. 169. I expand this critique of national or regional explanations in 'Cholera Riots: A Class Struggle We May Not Like'. *Social History* 42:2 (May 2017).
40. Tom Quinn, *Flu: A Social History of Influenza* (London, 2008), pp. 104–105.
41. 'Cholera in Ireland', *Morning Chronicle* 27 April 1832; Robert Newton's 'New Introduction' to Thomas Shapter, *History of the Cholera in Exeter in 1832* (London, 1849; reprinted, 1971), pp. v–ix, p. v.
42. 'The Cholera', *The Scotsman* 19 July 1892, p. 5, from Reuters the previous day. On the crowd estimates, see 'Rioting in Russia ... Doctors Killed by the Mob', *Pittsburgh Dispatch* 27 July 1892, p. 12. 'The Cholera', *The Scotsman* 19 July 1892, p. 5; 'Punishment of Leaders of Russian Cholera Riots', *St. Paul Daily Globe* 29 December 1892.
43. See Cohn, *Epidemics*, chs 19–28.
44. Numerous papers across America covered the story, such as *Warren Sheaf*, 10 May 1894, p. 2, but I know of no historians to have mentioned it.
45. 'Riddled the Pesthouse with Bullets', *New York Tribune* 28 July 1897, front page, from *Birmingham State Herald* 27 July 1897.

46. For these examples, see Cohn, *Epidemics*, chs 11 and 12.
47. Many US and Canadian newspapers chronicled at least eight separate riots at Montreal from 28 September to 31 December 1885, four of which amassed crowds estimated at over 1000. Also, see Michael Bliss, *Plague: A Story of Smallpox in Montreal* (Toronto, 1991). For the Chicago riots, see ‘Health Officers Mobbed. Attacked by Bohemians’, *Kalamazoo Gazette* 1 June 1894, p. 6; ‘Raid on the Plague: Health Officers Under Guard Visit Smallpox Patients’, 1 June 1894, p. 7, ‘Say They Are Brutes: Bohemians’, 3 June 1894, p. 3, and ‘Evils Bred by Pest’, 11 June 1894, p. 4. Newspapers across America covered the Milwaukee assemblies and riots that gained control over an entire city district for almost a month; see, for instance, *Chicago Daily Tribune* 10 August 1894, p. 2; 29 August 1894, p. 3, and 30 August 1894, p. 3; *Morning Call* 7 August 1894; *Evening World* 7 August 1894; *Big Stone Gap Post* 16 August 1894; and *Vermont Phoenix* 17 August 1894; *Sun* 29 August 1894; *Jasper Weekly Courier* 7 September 1894; and *Fair Play* 8 September 1894; also, Judith Walzer Leavitt, ‘Politics and Public Health: Smallpox in Milwaukee, 1894–1895’ in *Sickness and Health in America: Readings in the History of Medicine and Public Health*, eds J. W. Leavitt and Ronald L. Numbers (Madison, 1978), first published in *BHM* 50 (1976), and idem., *The Healthiest City: Milwaukee and the Politics of Health Reform* (Princeton, 1982). For Turtle Creek, see ‘Conflict Over the Location of a Smallpox Hospital’, *The Times* (Washington DC) 15 May 1900, front page; *Biloxi Daily Herald* 15 July 1900, front page; *Morning Herald* 14 May 1900, front page; ‘A Lively Riot. People at Turtle Creek’, *Times Picayune* 14 May 1900, p. 8; *Sioux City Journal* 15 May 1900, p. 6; and *Little Falls Herald* 18 May 1900, p. 7.
48. For these, see Cohn, *Epidemics*, ch. 12.
49. British Library: Indian Office Records and Private Papers: Report of Native Papers Published by the Bombay Presidency, L/R/5/150: Week ending 7 November 1896, no. 12; and Mumbai’s Anglo-Gujarati *Kaiser-I-Hind* on 1 November 1896. Also, see Aditya Sarkar, ‘The Tie that Snapped: Bubonic Plague and Mill Labour in Bombay, 1896–1898’, *IRSH* 59 (2014): 184.
50. ‘India: Famine and Plague; Hatred of Plague Doctors’, *New York Times* 28 May 1900.
51. L/R/5/152, week ending 13 March 1897, no. 47: *Praja Pokár* 10 March and *Deshi Mitra* 11 March. David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley, 1993), p. 217, also cites it.

52. L/R/5/152, Week ending 20 March 1897, no. 34, *Kathiawar News* 13 March, and, for many other such protests, Cohn, *Epidemics*, ch. 14.
53. See note 49.
54. The example comes from Udváda in the district of Surat; L/R/5/152, week ending 20 March 1897, no. 35: *Gujarát Mitra*.
55. L/R/5/77 selections from the vernacular newspapers published in the North-Western Provinces and Oudh 1900, week ending 1 May 1900, no. 12: *Hindustan* (Kalakankar) 26 April.
56. 'The Plague in Shanghai', *North China Herald* 11 November 1910, p. 337.
57. 'Mob Excesses in Hongkew', *North China Herald* 18 November 1910, p. 392.
58. Retrospective account of Shanghai's chief of police: 'Completes Fascinating Shanghai Career', *North China Herald* 25 March 1936, p. 533.
59. Bryna Goodman, *Native Place, City, and Nation: Regional Networks and Identities in Shanghai, 1853–1937* (Berkeley, 1995), p. 156.
60. *Ibid.*, p. 125.
61. 'La peste à Oporto', *Le Temps* 22 August 1899 and 24 August 1899; and Myron Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York, 2007), p. 125.
62. For numerous examples of these town meetings, peaceful demonstrations, letters, and resolutions, see Cohn, *Epidemics*, ch. 14; for ones of mill workers in Mumbai, see Sarkar, 'The Tie That Snapped', p. 185.
63. For charges of blackmail by threatening the uninfected with confinement in segregation camps, see L/R/5/151, week ending 7 November 1896, no. 19; *Champion*, L/R/5/151, 153, week ending 19 March 1898, no. 21; *Kaiser-I-Hind* 13 March; and *The Times* 14 April 1900, p. 3. For other forms of corruption, see L/R/5/153, week ending 19 March 1898, no. 21, the *Indian Spectator* 16 March.
64. *Kalgoorlie Western Argus* 8 July 1897, p. 19.
65. For Pune, see L/R/5/153, week ending 24 April 1897, nos 8–16.
66. 'The Poona Outrages', *Guardian* 3 July 1897.
67. 'The Cawnpore Plague Riots', *The Scotsman* 15 July 1900, p. 8.
68. According to the papers, General Gatacre was the pioneer of these compromises and the first to reject strict segregation and ruthless searches violating privacy and religious sensibilities. On changes after the 9 March 1898 riots, see 'Notes from India', *The Lancet* (16 April 1898): 1080–1081. At Calcutta fundamental reforms were achieved in the aftermath of its most devastating plague riots of late June to 1 July 1897; see 'The Calcutta Riots', *The Guardian* 3 July 1897, p. 9 and 'The Riots in Calcutta', *The Scotsman* 3 July 1897, p. 9. At Dinapore

- in April 1900, the magistrate dismissed disinfection parties, unless unopposed, and troops were ordered to abstain from force when carrying out plague evacuation: 'Notes from India', *The Lancet* (26 May 1900): 1548. At Cawnpore, plague measures were modified and compulsory removal of plague patients to hospitals was abolished after its riot: 'Parliamentary Intelligence', *The Lancet* 155 (5 May 1900): 1333.
69. L/R/5/153, no. 23, *Kesari* 15 March.
  70. L/R/5/153, week ending 12 March, no. 26, *Indu Prakash* 6 March.
  71. L/R/5/153, week ending 19 March, no. 16, *Indian Spectator* 13 March.
  72. L/R/5/153, week ending 12 March, no. 26, *Indu Prakash*.
  73. L/R/5/153, week ending 26 March 1898, no. 33; *Mahrátta* 20 March; week ending 23 April 1898, no. 41, *Native Opinion*, 14 April; week ending 14 May 1898, no. 22, *Gurákhí* 7 May; week ending 11 June 1898, no. 30, *Madhumakshika* 6 June; L/R/5/153, no. 31, *Indian Spectator*, 5 June; L/R/5/153, no. 32, *Akbhar-e-Islam* 9 June.
  74. L/R/5/153, no. 16, *Indian Spectator* 13 March; no. 18, *Champion* 13 March; no. 23, *Kesari* 15 March.
  75. L/R/5/153, no. 20, *Gujaráti* 13 March.
  76. L/R/5/153, no. 16, *Indian Spectator* 13 March.
  77. L/R/5/153, no. 18, *Champion* 13 March.
  78. *Ibid.*
  79. L/R/5/153, no. 19, *Mahrátta* 13 March.
  80. L/R/5/153, no. 21, *Kaiser-I-Hind* 13 March.
  81. L/R/5/153, no. 26, *Indu Prakash* 6 March.
  82. L/R/5/153, no. 23, 15 March; no. 24, *Rást Gofár* 13 March; no. 25, *Gurákhí* 15 March.
  83. L/R/5/153, week ending 26 March, no. 33; also see L/R/5/153, week ending 26 March 1898, no. 33, *Mahrátta*, 20 March.
  84. Week ending 2 April 1898, *Hindu Punch* 24 March.
  85. Week ending 11 June 1898, 6 June.
  86. Cited in L/R/5/153, week ending 18 June 1898, no. 25, *Indian Spectator* 12 June.
  87. L/R/5/153, week ending 11 June 1898, no. 29, *Akbár-e-Sodágar* 10 June.
  88. L/R/5/153, week ending 26 March 1898, no. 33, *Mahrátta* 20 March.
  89. To be sure, others have shown that Indian plague rioters protested against government abuses; see, for instance, Arnold, *Colonizing the Body*, ch. 5; Rajinarayan Chandavarkar, 'Plague Panic and Epidemic Politics in India, 1896–1914', in *Epidemics and ideas: Essays on the historical perception of pestilence*, ed. Terence Ranger and Paul Slack, pp. 203–240 (Cambridge, 1992); and Sarkar, 'The Tie that Snapped'. But

- none have placed the claims of supposed poisoning and medical dissections in this larger context.
90. L/R/5/153, week ending 6 March 1897, nos 28–32; week ending 20 March 1897, no. 27; week ending 24 July 1897, no. 11; and week ending 31 July 1897, no. 36.
  91. L/R/5/153, week ending 10 April 1897, no. 34.
  92. See Cohn, *Epidemics*, ch. 9.
  93. See Sarkar, ‘The Tie that Snapped’, pp. 186–187, 190, 193, 202, 206, who shows the bridging of trades and mutual support by a wide-spectrum of Mumbai’s working class with riots and strikes attacking governmental authorities and employers. Plague infused a new working-class militancy that tore asunder earlier servile ties binding laborers and employers and had far-reaching consequences for labor relations through the twentieth century.
  94. See above, and L/R/5/153, week ending 21 May 1898, no. 53, *Champion* 15 May; and week ending 11 June 1898, no. 29, *Akbbár-e-Sodágar* 10 June.
  95. See Cohn, *Epidemics*, chs 9–10.
  96. ‘The Indian Riots’, *Kalgoorlie Miner* 8 July 1897, p. 2.
  97. ‘Serious Plague Riots’, *New York Times* 10 March 1898; ‘The Plague at Bombay’, *Guardian* 10 March 1898, p. 5; L/R/5/153, week ending 12 March 1898, Bombay riots of 9 March, nos 22–28, cited from *Jám-e-Jamshed* 10 March.
  98. Sarkar, ‘The Tie that Snapped’, p. 197.
  99. See for instance *Rást Goftár*’s defense, 3 April 1898, L/R/5/153, week ending 9 April 1898, no. 10, against claims of a Reuters’ correspondent to London’s *Daily Mail* that ‘[plague] riots [in general] were instigated by influential Muhammadans’ in India. To protect itself, *Rást Goftár* claimed that ‘rioting in Bombay as well as in other places in India is generally resorted to by the lowest of the low classes, the scum and the dregs of the various nationalities’. ‘Rioting in Bombay’, *Evening Herald* 10 March 1898, p. 3; *Sun*, 10 March 1898, p. 3; and *The Times* (Washington DC) 10 March 1898, front page.
  100. L/R/5/151, week ending 17 October 1896, nos. 16, 11 October, and 17, 11 October; the Anglo-Gujaráti *Gujaráti* and the Maráthi *Satya Mitra* expressed the same surprise and resentment that the colonial government had not recognized caste feelings and religious sentiments.
  101. L/R/5/153, 152, week ending 19 June 1897, no. 23 (the Karachi paper *Sind Sudhbár*, in Sindi, 5 June). Its comments came in response to ‘hardships endured by passengers quarantined at Malir’.
  102. L/R/5/153, week ending 21 May 1898, no. 71, *Sbri Sayáji Vijaya* 14 May.

103. There were attacks on individuals such as the Parsees.
104. Major E. Wilkinson's *Report on Plague and Inoculation in the Punjab from Oct 1st to Sept 30 1901* (Lahore, 1903), part 2, p. 2 even asserted that 'Everywhere' the greatest resistance to adopting the government's plague policies came from 'the well-to-do and educated classes'.
105. See Cohn, *Epidemics*, ch. 17.
106. Ira Klein, 'Plague, Policy and Popular Unrest in British India', *Modern Asian Studies* 22 (1988): 749; and Ira Catanach, 'Fatalism? Indian Responses to Plague and Other Crises'. *Asian Profile* 12:2 (1984): 190 have taken the rare rumors of poisoning and tampering with plague corpses as the rule.

# Bloeming-Typhoidtein: Epidemic Jingoism and the Typhoid Corpse in South Africa

*Jacob Steere-Williams*

*There is a foe who deals hard knocks, In a combat scarce Homeric: It's not the Boer,  
who snipes from rocks But fever known as Enteric*<sup>1</sup>

In a shocking exposé of British hospital accommodations during the South African War (1899–1902), the American-born Conservative MP for Westminster William Burdett-Coutts (1851–1921) stood before the House of Commons on 29 June 1900 and recounted a harrowing anecdote from his wartime travel to Bloemfontein.

After the railway was opened, there was one of the hospitals containing typhoid patients which had no disinfectants of any kind, and another in which the corpse of one of the patients who had died during the night had been stuffed into the only lavatory there was in the hospital. It was found by the patients who went to use the lavatory in the morning.<sup>2</sup>

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Months earlier, in January of 1900, Burdett-Coutts had sailed for South Africa as a special war correspondent for *The Times*, writing to his Westminster constituents days before departing that ‘too much information cannot be given to the public’ as to the treatment of the sick and wounded.<sup>3</sup> By early February he arrived in Cape Town and joined the combined British forces at the most intense and grim sites of battle, particularly around Bloemfontein. In March, he published the first in a series of seven articles in *The Times* titled ‘Our Wars and Our Wounded’. His story above, of a typhoid corpse stuffed into a lavatory, highlights the jarringly corporeal nature of Burdett-Coutts’ lay journalism. So concerned was Britain’s Parliament that on 19 July 1900 it established a Royal Commission—that pre-eminently Victorian response to real or imagined crisis—to investigate the care and treatment of the sick and wounded in South Africa.

In one of his earliest letters to *The Times* Burdett-Coutts asserted that ‘England realizes now that her Empire can only be sustained in the last instance by the sacrifice of human life.’<sup>4</sup> What remained unclear in the middle of 1900 was the extent to which *The Times* was shaping or being shaped by public discourse in asserting, as it did in September 1900, that this was ‘more than any other in modern times... a popular war’, which belied the growing anti-war, even pro-Boer sentiment in the British popular press.<sup>5</sup> By the end of 1900 even the jingoist patriotism, ‘the pro Rhodes propaganda’ of *The Times*, waned as the conflict became entrenched as embarrassing and costly.<sup>6</sup>

Though there was significant governmental censoring—of letters, telegraphs, and field reports—it was clear by the middle of 1900 that far more British soldiers, officers, and medics were sick or dead from one disease—typhoid fever—than wounded in battle. In many ways the typhoid epidemic *was* the defining experience of the military conflict, lived on the veldt (grasslands) or lived through reports read in Burdett-Coutts’ *Times* journalism, or seen in the ‘grim photographic evidence of stretcher bearers carrying away hundreds of British corpses’ in the periodical pages of *Black and White* and *The Illustrated London News*.<sup>7</sup> ‘Typhoid’, noted an anonymous medical officer in the *British Medical Journal* in July 1900, is ‘the most deadly of our enemies’ in South Africa.<sup>8</sup>

Anecdotes like a desacralized corpse suggested a deeper mismanagement than Burdett-Coutts’ ‘sacrifice of human life’ during the exigencies of war. By late May of 1900 even Burdett-Coutts had changed his rhetorical tune, his pen hardening to the point of a British sabre as he

highlighted ‘growing scenes of neglect and inhumanity’.<sup>9</sup> Sickness, suffering, and death in the hands of an empowered popular press were binary opposites to the jingoed virility of masculine British soldiers. While mortality figures resonated with a Victorian public enamored, as Ted Porter has argued, with statistical ways of knowing, Burdett-Coutts’ journalism struck the heart of the British public through descriptive moralizing.<sup>10</sup> The raw data of a soldier down with typhoid became in his reporting a corpse stuffed into a lavatory. More than just the figure of the corpse, corpse-like sufferers came to the fore as alarming incidents were reported where men were struck

in the worst stages of typhoid, with only a blanket and a thin waterproof sheet ... between their aching bodies and the hard ground, with no milk and hardly any medicines, without beds, stretchers, or mattresses, without pillows, without linen of any kind, without a single nurse amongst them.<sup>11</sup>

Some lay lifeless, Burdett-Coutts pressed on, with ‘flies in black clusters too weak to raise a hand to brush them off’, while others wandered around camp half-naked in a typhoid-induced delirium.<sup>12</sup> At a time heightened by both jingoist pro-imperial bravado and growing anti-war agitation in Britain, the stark reality of war in South Africa painted by Burdett-Coutts shocked late Victorian sensibilities in a way that pushed even Hobsonian boundaries. Burdett-Coutts’ stories of emasculated bodies and desecrated corpses struck a particular chord in Parliament, particular to anti-war Labour MPs, but more important, perhaps, were its effects on the Victorian social body.

The commission appointed to investigate the charges of mismanagement was thrust into the difficult prospect of untangling Burdett-Coutts’ sweeping indictment. Was he a ‘superficial observer’ and a ‘sensational publicist’, as some politicians claimed, or were these the real scenes from South Africa?<sup>13</sup> The commission spent nearly two weeks in London and at the Netley Hospital, interviewing military officials, wounded soldiers, and medics who, in the midst of the conflict, had recently returned from South Africa. Twice Burdett-Coutts was called to testify before the commission, at the outset of the investigation in London in July and again in late October, once the group had returned to London. On 30 July 1900, one of the commissioners, Sir David Richmond, Lord Provost of Glasgow, directly asked, ‘what is the suggestion when you say the corpse was stuffed into the lavatory; do you think it was put there to get the

corpse out of the way?’ Burdett-Coutts briskly replied, ‘Yes. Because probably they had no other place to put it.’<sup>14</sup> The commissioners wanted to find out if he was right.

In August, the group of five commissioners sailed for South Africa, where they travelled for three months observing firsthand the bell tents of field hospitals and the sites of battle at the Modder River, speaking with lowly privates to commanding officers. Though they were charged with investigating the larger problem of hospital management and accommodation, the commissioners were especially bent on assessing the reality of the typhoid corpse. They made it a point to inquire ‘in all quarters to find out whether there is any foundation for’ the allegation by Burdett-Coutts that a typhoid corpse was shoved into a lavatory.<sup>15</sup>

They interviewed Surgeon-Lieutenant John William Smith, practicing surgeon in Manchester, who was attached to the #9 General Hospital, first in Cape Town and, at the height of the typhoid epidemic, in Bloemfontein. Asked if he had experience of typhoid corpses being thrown into a lavatory, he replied ‘no, we had nothing of the sort. We had a mortuary the other side of the donga [a dry eroded land previously filled with water]’.<sup>16</sup> Royal Army Medical Corps Principal Medical Officer R. Exham, who described his duties as ‘the supervision of everything’, might have been an authoritative source. Interviewed on 1 September 1900 Exham, when prompted to answer about corpses put into lavatories, noted that ‘I have made careful enquiry into that point; and every medical officer in charge of every hospital here denies that any such thing occurred in their hospitals. I have sent round to special enquiries.’<sup>17</sup>

Kendal Franks, Vice President of the College of Surgeons, Ireland, equally denied Burdett-Coutts’ claim that funerals were happening day and night at Bloemfontein, that ‘shapeless forms were being carried to unknown, nameless graves’. Franks argued that funerals were held from 3 pm to 5 pm daily. ‘There were great numbers of them’, Franks admitted, but every grave was numbered and registered in the Cathedral books.<sup>18</sup>

The Royal Commission concluded that ‘Mr. Burdett-Coutts was misled by his informant.’<sup>19</sup> They reported that even in Bloemfontein, where the staggering typhoid deaths reached upwards of 40–50 per day, each corpse was buried separately, away from camp, ‘with every respect and care, and each grave was numbered, and the number and name of the dead man registered’.<sup>20</sup> Burdett-Coutts was quick to defend his assertion of what the commission called ‘a gruesome story’. In *The Times* on 13

February 1901 he maintained he heard it from a ‘distinguished major-general, then a patient in a town hospital at Bloemfontein ... anxious to give evidence before the Commission; but being away in the field it was impossible for him to attend’.<sup>21</sup> And, while the commission admitted that the chief difficulty with obtaining evidence as to ‘the true condition of affairs’ in South Africa was that witnesses were either too partisan and in favor of the war, or, like many privates, were ‘very slow to make complaints’, they nevertheless branded Burdett-Coutts’ claims as exaggerated and misleading.<sup>22</sup> He was, to borrow Bernard Porter’s phrase, just another ‘critic of empire’.<sup>23</sup>

The anxiety produced by the story of one typhoid corpse, perhaps *because* of its questionable authenticity, is a rare glimpse into late Victorian fears of the body during, in spite of what the *Times* noted, a largely unpopular and costly war that exposed the shortcomings of military organization on an unprecedented scale. That the corpse was at the center of concern here is perhaps unsurprising considering the sheer statistics of those sick from disease, wounded in battle, and those that died in both ways. Historians have shown that around 75,000 Britons were struck with typhoid (at the time also called enteric) fever during the South African War, and over 10,000 died from the disease.<sup>24</sup>

Once labeled a ‘national disgrace’ at home in Britain, typhoid fever had steadily declined from the 1870s, fueling a triumphalist narrative of organized and preventive state medicine. The staggering rates of typhoid sickness and death among British troops in South Africa, then, represented a challenge to both British imperial might, but also in deeply embedded ways to an emerging discourse about the strength of British public health. Historian Vincent Cirillo has shown, likewise, that typhoid accounted for twice as many deaths as combat.<sup>25</sup> Coupling the British response to typhoid during the South African War to the American corollary in the Spanish–American War, Cirillo has gone as far as to call them ‘medical fiascoes’.<sup>26</sup>

Britons at the time had real questions. How would military personnel care for the sick? How would they dispose of that many bodies? Would their deceased loved ones receive proper moral and religious respect? How would they grieve, and come to memorialize the dead, as the corpses of fallen soldiers were buried on the South Africa veldts, not transported back to Britain like many Nelsons in barrels of brandy? Practically important to Royal Army Medical Corps officials was the newly important public health question of whether the corpses of

sufferers of infectious diseases like typhoid fever posed a contagious threat. These were pertinent and immediate questions. Yet, in important ways, as I explore in this chapter, the South African War signified the corpse as a contagious metaphor for degeneration and disillusionment.<sup>27</sup>

Stories of real corpses stuffed into lavatories blended with tales of motionless, fly-laden, corpse-like soldiers waiting to die in field hospitals. Reading accounts of fever-induced, delirium-driven soldiers, victims of war, who were led to vampiric-like wanderings around military camps posed a threat to self-imposed British sensibilities of middle-class respectability. At the height of imperial anxiety, in other words, the British corpse in South Africa became an especially powerful Kristevian abject thing, vile, repulsive, and filthy. Across Victorian popular culture at the time, particularly in ‘imperial gothic’ literature, a palpable obsession had emerged around the reanimated corpse.<sup>28</sup> Submerged with the new evidence from the bacteriological laboratory, the corpse also became pathologized in the course of the war.

In this chapter, I argue that the South African War—particularly the corporeal experience of the largest epidemic of typhoid fever in modern British history—recast both popular and medical understanding of the corpse. In popular discourse the typhoid corpse embodied anxieties of the emasculated British soldier, while at the same time in medical writings the corpse was remade into a dangerous epidemiological threat that symbolized the fears of laboratory-based bacteriology. Yet these threads—popular and medical—were inexplicably comingled in *fin de siècle* Britain and across imperial networks in South Africa and also India; as late Victorian gothic writers like Bram Stoker reveled in the corpse as a metaphorical symbol of the precarious line between the living and the dead, laboratory bacteriologists like Edward Klein began to show that even after death corpses—acting as substrates for deadly microorganisms—remained ecologically ‘alive’ and a threat to the living. In a brief historical moment, erupting from imperial and bacteriological uncertainty, real corpses merged with symbolic corpses, posing a threat to the course of the South African War, and provoking a danger to the direction of the British Empire.

In what follows I trace three overlapping lines of imperial anxiety about the late Victorian corpse—in popular texts about the South African war, in bacteriological research, and in the practices of military medicine. I start by examining accounts from British popular culture that, even in their support of war and imperial expansion, framed

the typhoid epidemic in South Africa as a threat to British masculinity, to the physical male body, and by extension to the nation's imperial psyche.<sup>29</sup> Particularly striking is the way that one particular geography, Bloemfontein, was at the center of meaning making. Although in very different ways, Arthur Conan Doyle, who served as a volunteer doctor at the Langman Field Hospital in Bloemfontein, and Rudyard Kipling, who arrived at Bloemfontein as a reporter shortly after it was captured by the British in 1900, used their experience with typhoid to frame Bloemfontein as a site within a site, an epidemic place within an epidemic, to highlight the interconnectedness of death, warfare, and imperial citizenship.

The chapter then moves to consider a series of innovative and striking bacteriological investigations—laboratory and field based—as to the fate of microorganisms that cause infectious disease in corpses and in soils. Nascently ecological, the experimental research of British, French, and German bacteriologists suggested by the late 1890s that dangerous microbes could remain for long periods of time in soils and in corpses, thus pushing etiological boundaries of then-known disease causation models. The South African War was the first major British military conflict where the contagious corpse was seriously—although unevenly—considered, making it a site of contestation and expertise.

The chapter ends by moving away from both popular rhetoric and isolated laboratory studies to consider the diverse set of British experiences and practices of handling typhoid sufferers and typhoid corpses in wartime South Africa. Particularly revealing here are complex disinfection practices of field hospitals, both on bodies—living, dead, and liminal—and what bodies produce, including urine and feces as abject corpse-like substances. As evidenced through the examination of three key Royal Commissions—on hospitals, on typhoid fever, and on concentration camps—typhoid and the typhoid-corpse was at the center of understanding the war, its causes, and its effects on both individual bodies and the British social body.

### CAFÉ ENTERIQUE, BOULEVARD DES MICROBES

As capital of the Orange Free State, the second-largest Boer Republic to the Transvaal, Bloemfontein had a population in 1899 of only about 7000 inhabitants. After the Battle of Paardeberg, in February 1900, in which Boer General Piet Cronjé surrendered 4000 troops, the British

arrived in Bloemfontein with nearly 40,000 troops nary firing a shot in the town. Bloemfontein had only been connected to Cape Town from 1890, but within two months after British occupation the town's population had surged to over 70,000, many of whom were hospital staff.

But just as the British occupancy of Bloemfontein, and in May the relief of Mafeking, signaled a key British victory in the war, it also marked a crucial shift in the health of British troops. The Boers had cut of the water supply to the town, and those in Bloemfontein had to revert to using old wells. What ensued, not entirely caused by the change in water supply, was the single largest typhoid outbreak—an epicenter of the epidemic—during the South African War. Historian Philip Curtin has argued that before April 1900 the health of British troops had rarely been questioned, with only about 1500 dead from disease.<sup>30</sup> The rest of the year proved disastrous to British health, with Bloemfontein the center of the outbreak; in the first half of 1900 the British reported 1000 troops dead from the disease. The Royal Commission on Dysentery and Enteric later found that the incidence of typhoid at Bloemfontein was 10.6%, with 4280 cases in the course of seven weeks alone in 1900. W. J. Simpson, one of three commissioners, called it an 'extremely severe outbreak', while Arthur Conan Doyle echoed that it was the most lethal outbreak in modern warfare.<sup>31</sup>

For the British military, the high incidence of typhoid threatened the outcome of the war, in terms of morbidity—the cost of tending to sick soldiers down with a protracted disease—and mortality—of burying, reporting, and losing troops. I return in the third part of this chapter to the experiences of typhoid in South African field hospitals. Here, I am interested in the way in which the culture of death and dying during the typhoid epidemic in Bloemfontein epidemic was mapped on to the British social body, reifying larger imperial fears even as they were written by pro-imperialists Rudyard Kipling and Arthur Conan Doyle.

Kipling, who following his 1897 'Recessional' had been dubbed by one contemporary as 'the poet of the empire', was an annual visitor to South Africa in the 1890s. In March 1900, less than a year after publishing 'The Absent Minded Beggar', Kipling joined British troops at Paardeberg at the bequest of Commander Lord Roberts.<sup>32</sup> From there he spent about a month in Bloemfontein as a correspondent for *The Friend*, a British propagandist newspaper begun after Roberts shut down the two local papers. In addition to several poems and shorter works, Kipling wrote four stories about the South African War: *A Sahib's War* (1901), *The Comprehension of Private Copper* (1902), *The Captive*

(1902), and *Mrs. Bathurst* (1904). Even in his support of imperialism, Kipling's South African poetry reveals the ways that typhoid threatened British masculinity.

Consider, for example, Kipling's epidemiologically minded 1903 poem 'The Parting of the Columns', which envisioned an imperial connectedness between white British soldiers—English, Australian, Canadian, and by extension the larger body politic of settler colonialism. Kipling employed the dual threats of illness and death as shared experiences of war akin to 'the stories round the fire, the tales along the trek'. British soldiers shared everything from the same 'dust and sun' to the threat of death, 'the same old chance that laid us out'.<sup>33</sup> Here, as elsewhere in British popular culture, Africa, 'this stinkin land',<sup>34</sup> was seen as a pathologized landscape. Particularly important was the reality of typhoid fever in Bloemfontein. In this way, Kipling's poignant word play at the end of 'The Parting of the Columns', the portmanteau 'Bloeming-typhoidtein', immediately described the massive typhoid deaths at Bloemfontein, but more importantly the cultural process whereby two sides of the epidemiological triangle, disease and the environment, threatened the third, the host, in the form of united British white masculinity. At odds with both, lurking beneath the surface of his poetry, was death, associated here with the medical topography of Africa. As death collided with the demands of war, Kipling's vision of white masculinity was made vulnerable. Put another way, the reality of typhoid on the white British soldier was akin to the political pathologization of Boer politics in the 1890s and early 1900s. Historian Warwick Anderson has argued that American colonization in the tropics 'presented both a special resource for white male self-fashioning and its testing ground'.<sup>35</sup> In critical ways this too was true for the fashioning of white British masculinity during the South Africa War.

Equal in his Pan-Britannic support of the war when he joined the cause, Arthur Conan Doyle experienced, in a way more visceral than Kipling, the typhoid epidemic in Bloemfontein. At the Langman field hospital, Doyle's outright support of the war waned in his official writings from his 'sad resignation' that typhoid 'is beyond our present sanitary science and can only be endured'.<sup>36</sup> In what was ostensibly Doyle's most vocal condemnation of British policy, he scolded British politicians for not making anti-typhoid inoculation compulsory. Doyle had received, voluntarily, Almroth Wright's newly developed inoculation en route to South Africa onboard *Oriental* and praised the preventive on numerous occasions, despite its hotly contested effectiveness.<sup>37</sup>

In scenes more gruesome, if not more gripping, than his fictionalized accounts of Holmes and Watson, Doyle's narration of the typhoid epidemic at the Langman Hospital, a place he chillingly dubbed 'Café Enterique, Boulevard des Microbes' further demonstrates the way that death and dying—the corpse and the would-be corpse—accelerated deep-seated anxieties of imperial unity and strength.<sup>38</sup> 'We lived in the midst of death—and death in its vilest, filthiest form,' Doyle noted. 'We were ready for any moderate strain,' he maintained 'but that which was put upon us was altogether beyond our strength.'<sup>39</sup> 'Our accommodation was for fifty patients, but 120 were precipitated upon us, and the floor was littered between the beds with sick and often dying men,' he continued. In a passage that clearly identified the epidemic's emasculating propensity, Doyle described how 'two nursing sisters appeared among us, and never shall I forget what angels of light they appeared, or how they nursed those poor boys, swaddling them like babies and meeting every want with gentle courage'.<sup>40</sup> The gendered nature of epidemic crisis, it seems, had reduced the virile male soldier to a passive recipient of the heroic female nurse. Such views were corroborated by other physicians in Bloemfontein's field hospitals, such as Anthony Bowlby, whose case notes from the Portland Hospital suggested that even convalescing soldiers struck by typhoid had the 'condition of mental imbecility or childishness'.<sup>41</sup> For his part, Doyle pored over 'rows of emaciated men', gazing at 'horrible sights and sounds and smells' as 'the men began to wilt under the strain'. Yet, even as the 'boys' were like swaddled babies, Doyle noted in apologist sympathy that he 'never heard a murmur when he was faced with this loathsome death'.<sup>42</sup> As many as 5000 British troops and medical staff died from typhoid in Bloemfontein in the spring of 1900.

Doyle's pen did not stop with memorializing the ironic tropes of heroic nurses and the stoicism of emasculated soldiers; he described in detail what happened to the vast number typhoid corpses. 'Coffins were out of the question,' he recalled, 'and the men were lowered in their brown blankets into shallow graves at the average rate of sixty a day. A sickening smell came from the stricken town.'<sup>43</sup> In a visceral phrase that when coupled with Kipling's 'Bloemin-typhoidtein' cements the contemporary obsession with the disease and the place, Doyle sniped that 'you could smell Bloemfontein long before you could see it. Even now if I felt that low deathly smell, compounded of disease and disinfectants my heart would sink within me.'<sup>44</sup>

Doyle's sentiments were repeated by numerous other British observers in Bloemfontein in mid-1900. Wesleyan Chaplain E. P. Lowry, for example, who was attached to the South African Field Force, noted that the first military funeral in Bloemfontein upon British arrival in 1900 was of

A fine young guardsman who had taken part in each of our four famous battles ... just saw this goal of all our hopes and died. The fatal symptoms were evidently of a specially alarming type, for he was hastily buried with all his belongings, his slippers, his iron mug, his boots, his haversack, and the very stretcher on which he lay; then over all was poured some potent disinfectant. It was a gruesome sight!<sup>45</sup>

Both Kipling and Doyle in their popular, pro-imperialist writings on the South African War articulated the concept of a contagious geography of Bloemfontein. Whether it was the fault of the dirty Boers, some claimed, or the British government, others said, or simply but profoundly the diseased African landscape, the typhoid epidemic in Bloemfontein was at the center of making sense of the conflict. Popular accounts stressed the emasculation of British soldiers, of broken-down funeral practices and mishandled corpses. Combined, they threatened the imperial unity that Kipling envisioned, and the imperial strength that Doyle imagined. At the center of both idealizations of empire was the dead and dying body, and, by extension, how the corpse might serve as a metaphor for imperial decline. As I demonstrate in the following section, at the same time that popular accounts of war centered on the figure of the corpse, British bacteriologists were beginning to demonstrate the corpse as a specific public health threat. The significance of the massive typhoid epidemic, coupled with the funerary practices described by Doyle and Lowry above, resulted in a reassessment of the corpse as contagious—not just symbolic—during the war.

### ‘SOILED GROUND’: BACTERIOLOGY AND THE INFECTIVITY OF CORPSES

In June of 1898 the Slavonian-born, Viennese-trained bacteriologist Edward Klein, of St. Bartholomew's Hospital, London, injected typhoid bacillus into the abdomen of a guinea pig. After it had died, about a day later, Klein carefully placed the disease-ridden corpse in a small

wooden coffin and interned it to an experimental burial ground in his laboratory, consisting of a large wooden box filled with garden soil from Wandsworth Common.<sup>46</sup> The typhoid corpse sat there for 31 days until Klein exhumed the desiccated animal body, took a scalpel, and carefully opened the abdominal cavity, searching for colonies of *B. typhosus*.

Klein occupied a unique position in late Victorian medical science. Trained in histology, he began his public health career in the 1870s as a pathologist, carefully navigating the emerging field of bacteriology.<sup>47</sup> He was what his obituarist, his colleague William Bulloch, called, 'a bacteriologist malgré lui'.<sup>48</sup> Klein worked for the majority of his career at the Brown Institute in London, initially lured by John Burdon-Sanderson, and St. Bartholomew's Hospital, where he was lecturer of histology. Throughout his time in Britain Klein undertook numerous investigations for the Medical Department of the Local Government Board, including his corpse study described above. Klein's career was marred by scientific failures, mistakenly announcing the discovery of the germs of typhoid fever and diphtheria, and disagreeing with Robert Koch on the nature of the cholera vibrio. Yet he was always at the cutting edge of laboratory-based medical science, pushing etiological boundaries and training a legion of British bacteriologists.

In the middle of 1898, with the South African War on the near horizon, Klein was obsessed with the fate of microbes in animal corpses. He had two objects in mind. In bodies that die of non-pathological, normal conditions, what microbes are responsible for the process of decay and decomposition? And, in bodies that die of infective processes from dangerous microorganisms, how long do the latter remain in the animal corpse? How infective and dangerous, in other words, are the corpses of animal bodies dead from infectious disease? The bacillus responsible for causing typhoid fever, *B. typhosus*, was only one of Klein's experimental subjects: he killed, buried, and dug up guinea pigs inoculated with the germs responsible for causing bubonic plague, diphtheria, tuberculosis, and cholera. Klein's laboratory experiments also included controls. He killed a number of guinea pigs via asphyxiation using chloroform and buried them in the same manner and for the same period of time as those he injected with infective bacilli. Such experimental laboratory research was attended with a real danger. In October 1898, for example, the Pathological Institute of the Central Hospital of Vienna was the site of a well-known and disastrous, if localized, accident involving bubonic plague. A laboratory attendant, Barisch, through 'great carelessness', caught the plague, which spread to several others in the hospital.<sup>49</sup>

Klein's interest in experimentally designing a study of the infectivity of corpses was fueled by what he called a 'general and popular belief that the microbes of infectious disease retain their vitality and power of mischief within dead and buried bodies for indefinite period'.<sup>50</sup> Momentarily putting aside the pathological, bacteriological, and epidemiological evidence that led to the fear of corpses spreading infectious disease, Klein was perhaps more broadly reflecting the agitations from two likely camps, anti-premature burial groups, and popular gothic fiction.<sup>51</sup> The 1890s, as numerous scholars have shown, was rife with corporealized models of the contagious corpse.<sup>52</sup> The most well-known was Bram Stoker's 1897 *Dracula*, where vampires actualized as reanimated corpses. Yet, in ways that scholars have yet to explore, the reanimated corpse was not solely a fictive specter of gothic horror, but remade as a real public health concern in the 1890s. Though in the same cultural moment, bacteriologists such as Klein—and particularly those in Germany—ushered in a new view of the corpse, one that was pathologized via the language and the practices of laboratory-based bacteriology. The dead *could* communicate with the living, it seemed, via their microbe-ridden corpses.

Far from a reductionist vision, the fear was part of a burgeoning ecological view. Could the corpses of victims who had died of infectious disease, many wondered, once buried continue to harbor—and perhaps proliferate—specific disease-causing microbes? How long, moreover, could corpses be viable mediums of disease communication? This fear was a product of three overlapping traditions: epidemiological practices of tracing disease mediums, a hold-over of Pettenkoferian ideas of the maturation of disease via fermentation in the soil, and the early laboratory results of the identification of specific disease-causing microorganisms. Although his 1898 experiments gained widespread notice, Klein had long been interested in the infected corpse. In 1882, he conducted a series of experiments with *bacillus anthracis*, injecting guinea pigs and mice with the bacillus. Some he kept unopened above the ground while others were buried directly in dirt for various lengths of time from five to fourteen days. Klein dug up the corpses, removed the spleens and livers of the dead animals, chopped and mixed the organs with a sterile salt solution, and injected the emulsion into live guinea pigs. In this research, he found that no symptoms developed. As of 1882 he concluded that in the bodies of dead animals the anthrax bacilli 'owing to competition of hardier putrefactive microbes ... soon lose all power to infect'.<sup>53</sup> Klein—a keen follower of developments in European medical science—was re-energized to study the problem of contagious corpses

after reading about the extensive study by a German Commission—by Wolffhugel, Gaffky, Paak, Riedel, Berckholtz, Jager, and Scheurlen—who experimented from 1885 to 1891 following what Klein had done, in 1882, with injecting guinea pigs and mice with bacilli of anthrax, cholera, typhoid, and tuberculosis.<sup>54</sup> Although the German Commission in part confirmed Klein's statements from 1882, it did find that in 'exceptional cases' corpses could remain infective for long periods of time. This led to a fury of research activity, particularly by other German bacteriologists, as to the infective corpse. W. Loesener, for example, conducted a series of experiments in the mid-1890s on infecting pigs with pathogenic material and burying them in porous soils. He found typhoid bacillus still viable after 96 days, cholera bacillus after 28 days, and anthrax bacillus after an entire year.<sup>55</sup> Perhaps Klein was wrong.

Research on the viability of *B. typhosus* was furthered in France by M. P. Remlinger and M. G. Schneider at the Val-de-Grâce Laboratory in Paris. In an even more ecological framework than Loesener, the Paris team investigated the extent to which the typhoid bacillus exists outside the human body in a variety of mediums. They found that *B. typhosus* could survive in samples of soil, dust, the refuse from army barracks where there were cases of typhoid, and in feces and urine.<sup>56</sup> Klein's 1898 research was thus building on much broader European interest as to the existence of germs outside of the animal body. He was also tapping into field-based bacteriological studies in Britain by Sidney Martin and A. C. Houston. Martin and Houston—also for the Medical Department of the Local Government Board—had in 1896 and 1897 demonstrated that *B. typhosus* could remain virulent for extended periods of time in sterilized cultivated soils, what was then called the 'saphrophytic' existence of the bacillus in the soil.<sup>57</sup> Klein's central findings, published in the Annual Report of the Medical Department of the Local Government Board and reported across the Anglo-American and European medical press, was that dangerous microbes were present in corpses, but for a shorter period than that suggested by Loesener or the German Commission: on average, about a month.

Even outside of what was becoming mainstream bacteriological research, the corpse was being remade in 1890s Britain as a result of public health legislation aimed to curtail the handling of corpses, particularly contagious corpses. Sections 8–10 of the Infectious Disease (Prevention) Act, 1890, for example, stipulated that corpses dead from infectious

disease could not be kept for more than 48 hours in a dwelling. The Act granted local authorities the power to prevent infectious corpses in hospital from going back to homes rather than directly to a mortuary. As early as 1884, before the International Health Exhibition held in London, A. Wynter Blyth, Medical Officer of Health for St. Marylebone, argued that corpses were ‘extremely dangerous’ after death from infectious diseases like smallpox, typhus, plague, and typhoid.<sup>58</sup>

Bacteriological research in the 1890s thus furthered, not created, the fear of corpses spreading disease. What was new of bacteriological claims was that they opened up a new ecological world under the ground that had to be considered as a vehicle in spreading disease and made the soil a critical factor in the continuation of the typhoid germ.<sup>59</sup> From the 1850s water had long been seen as the primary medium for spreading typhoid fever; by the 1890s food, particularly milk, shellfish, and flies, had extended the etiological picture of the disease. By the start of the South African War, soil, corpses, and dust were on the cusp of joining the epidemiological map of how typhoid spread.

I now turn to the South African War and examine that ways that fears over contagious corpses, both in terms of emasculating British soldiers (examined in the first part of the chapter) and in spreading infectious disease (examined in part two), were put into practice during the war, particularly at field hospitals.

### ‘THE MOST SERIOUS EPIDEMIC OF MODERN TIMES’

‘The whole hillside for the circuit of a mile around Bloemfontein was contaminated’ exclaimed A. W. Bowlby, physician at the Portland Hospital, before the Royal Commission on the Care and Treatment of the Sick and Wounded on 28 August 1900.<sup>60</sup> The Portland was the first private voluntary hospital sent to South Africa; it initially set up in Rondebosch, near Cape Town, and operated with relative ease for two months. On 9 January 1900, for example, Bowlby reflected in his diary that ‘the general health of our troops is excellent’, though he was aware that farther north ‘there is now a little typhoid making its appearance & I expect there will be more soon’.<sup>61</sup> At Rondebosch, the hospital cared by 477 patients, with only a single man having died. This dramatically changed in April 1900 when the hospital was transferred to Bloemfontein, arriving at the height of the typhoid epidemic.

While at Rondebosch the Portland made no specific provisions for dealing with typhoid patients, in part because it saw so few cases. But at Bloemfontein typhoid was the central feature of the day-to-day activity of the hospital, a point even reflected in the layout and design. Typhoid was the only disease to have its own pathologized encampment technologies, specially marked bed pans and latrines for typhoid patients, and separate wards in ordnance (not bell) tents ‘pitched in the rear of the camp so as to be much isolated as possible’.<sup>62</sup> The stools and urine of typhoid patients were mixed with sawdust and burnt—by indigenous laborers, pejoratively called ‘kaffirs’—and all linens that came into contact with typhoid sufferers was separated soaked in perchloride of mercury or Izal disinfectant, and boiled in caldrons or steamed in the hospital’s Thresh disinfectant. With field hospitals stretched beyond capacity in the spring and early summer of 1900, it is unclear the extent to which these precautions were undertaken. One nurse, Emily Jane Wood, who arrived in Bloemfontein in June, noted in her diary that ‘there are no sanitary arrangements here so it is no wonder there is so much enteric about’.<sup>63</sup>

It was in spite of such obsessive precautions with sick bodies—and what sick bodies produce—that Bowlby frequently complained in his diary and his official reports about the ‘very soiled condition of the ground’ around the camp.<sup>64</sup> Without a clear epidemiological route of infection—in Britain, epidemiologists frequently pointed, only sometimes correctly, to water supplies as the primary medium for typhoid epidemics—British officials found others to blame, particularly the enemy Boers and indigenous Africans. Bowlby argued that the typhoid epidemic was spread to Bloemfontein from the Modder River during the Battle of Paardeberg, where British soldiers contracted the disease by drinking water contaminated ‘from various sources in its course, mainly dead horses and possibly dead Boers’.<sup>65</sup> Howard Tooth, Bowlby’s colleague at the Portland, likened the Modder River as a kind of environmental index case, where ‘there was all the filth of the laager, and not a few corpses of the Boers who ... had died of typhoid fever’.<sup>66</sup>

W. J. Simpson, one of three investigators on the Royal Commission engaged to examine the typhoid epidemic, equally placed blame on the Boers. ‘As regards sanitary arrangements in the Boer camps,’ he argued, ‘there appears to have been none.’<sup>67</sup> Simpson argued that Boers sick with typhoid simply shallowly buried their excreta and urine, which leached into the soil, and found its way into the water and the air. As the British overtook key Boer camps, the former were struck with the disease of the latter via an infectiously charged environment.

It was not just medics who blamed the moral failings of the Boers for the spread of typhoid. The parliamentary-appointed all-female Fawcett Commission, in its 1902 report on the concentration camps, argued that the lack of sanitary arrangements and high incidence of typhoid in Boer camps was due to the ‘unsanitary habits of the people’ who were ‘not unlike the more ignorant of the English poor’ and whose neglect—especially that of women and children—led to the ‘extensive fouling of the floors of tents and the ground of camps’ with enteric excreta.<sup>68</sup> In many cases, the British actually carried the blame for unsanitary conditions. Often, this was centered on the handling of corpses. At the Bethulie Camp, on 9 September 1901, the camps commission found ‘13 corpses lying in the mortuary tents ... the supply of coffins at one time had been short, and the dead had been buried in blankets, the same as soldiers who die in military hospitals’.<sup>69</sup> One Boer prisoner, Mrs. Henry Venter, described the Heilbron camp as ‘a living grave’, and Johanna Rousseau, reflecting on the Kroonstad camp, noted that ‘sometimes there were two corpses in one coffin. They [British camp authorities] often put as many as eight coffins in one grave.’<sup>70</sup> In royal proceedings, as in popular and personal writings, the corpse during the South African War stood as a potent symbol for military disorganization. For medics, the corpse was much more problematic. Sometimes medics in field hospitals eschewed the moral failings of Boers in spreading typhoid and instead blamed, as Kipling envisioned, a pathologized African landscape as ‘entirely beyond human control’.<sup>71</sup> They often cited either the numerous and debilitating dust storms, or simply the longstanding etiological theory that typhoid struck soldiers, as it did in India, newly arrived in the tropics.

Royal Army Medical Corps Lieutenant Colonel Robert Caldwell in his widely read 1905 *Military Hygiene* explained the high incidence of typhoid fever in South Africa through a comparison with the experience of the disease in contemporary India. There, Caldwell argued, typhoid was endemic because of the poor ‘hygienic habits of the natives of India for centuries past’, which led to a ‘universal’ pollution of the soil’, a striking overlay with the arguments of those in South African field hospitals like Bowlby.<sup>72</sup> In the hands of Kipling-esque pro-imperialists, military leaders like Caldwell infused soil-based bacteriological theories with deep-seated racial assumptions and moral victimizing. The South African or Indian soil was critical for spreading typhoid, but there were key etiological paths still unmapped/How did the bacilli arrive into the soil? Who was to blame? How long could it remain there and infective? How could soil-borne bacilli infect others? Sir William Church, reflecting in

1901 after extensive experience in South African field hospitals, lamented ‘we are extremely ignorant of its [typhoid bacillus] power and of its vitality, or even of its life-history outside the body’.<sup>73</sup>

It was within this framework of uncertainty—one that relied on bacteriological specificity but was charged by race and geography—that the corpse came to hold such significance in the war. With thousands sick and hundreds dead each day in Bloemfontein, were recently buried typhoid corpses infecting the soil and subsequently being spread via whirlwinds, called ‘devils’, shallow wells, and flies? Caldwell, for example, argued that ‘inside a corpse the germs may exist for an indefinite period, and possible cause an extensive spread of the disease’, which, while not up to date with Klein’s research, was alarmingly foreboding.<sup>74</sup> The response to the contagious typhoid corpse was uneven during the war. Captain Edward Ward, central to the siege of Ladysmith, argued that typhoid corpses should be cremated, an interesting analogy to the cremation movement in Britain. ‘The mode of burial is very simple at present’, he wrote, describing how ‘the corpse is tied up in a blanket and let down into a few feet of earth’.<sup>75</sup> Deeply troubling from a public health perspective, Ward feared ‘the condition of the ground near the large hospital camps like Intombi or Bloemfontein’. ‘We are putting into the ground’, he warned,

a grave source of danger to the population which might settle in the vicinity. I think something should be done in the way of putting some strong destructive agent into the grave with the object of destroying the bacilli, or, as I say, what would be better still, carrying out cremation.<sup>76</sup>

Even after the war ended, the lingering public health effects of the typhoid epidemic continued. Of particular concern to Medical Officers of Health was soil infested with typhoid bacilli, especially from previous sites of field hospitals. John J. Boyd, Medical Officer of Health for Pretoria, for example, wrote to the Government Bacteriologist Walter C. C. Pakes in October 1905, ‘anxious to have a few samples of earth examined’ from ‘old Hospital sites’ with the view of detecting evidence of faecal contamination and the possible presence of the Typhoid bacilli’.<sup>77</sup> Boyd, who had been Medical Officer for South Shields, near Newcastle upon Tyne, took up the post for Pretoria in 1904. Replying two days later, on 16 October 1905, Pakes agreed, sending sterile bottles for the collection of samples and advising Boyd to use a ‘sterile

spatula', but in the end no active typhoid bacilli was found.<sup>78</sup> Such calls were common in the first two decades of the twentieth century, in Britain and across the British Empire, and the fear of the contagious corpse of war lingered.

By the first decade of the twentieth century the definitive work on typhoid across the British Empire was E. A. Roberts' 1906 *Enteric Fever in India and in other Tropical and Subtropical Regions*. Reflecting on the South African experience, Roberts was adamant that the 'corpses of Enteric Fever patients are infectious and they should be wrapped in a sheet wrung out in disinfectant and removed to the mortuary as soon as possible'.<sup>79</sup> Roberts recommended a laundry list of practices when dealing with typhoid corpses, from disinfecting all post-mortem fluids, including water used on the corpse, to cleaning the room, furniture, and equipment. Care and attention should be paid, he noted, to keeping flies away from corpses, and there should be a 'plentiful layer of sawdust' under the corpse in the 'air-tight' coffin. Even the carriage used to convey corpses to the cemetery should be disinfected, according to Roberts, indicating the complexity of the preventive approach to stopping the spread of the disease.

## CONCLUSION

As the South African War concluded, in May 1902 at Vereeniging, the conflict had strained not only 'the Empire' but 'the imperial idea itself, for this became the largest and costliest war waged by Britain between the Napoleonic Wars and the Great War of 1914–18'.<sup>80</sup> And, while historians have articulated how the imperial psyche was pressed by the reports on concentration camps by the likes of Emily Hobhouse, less explored are the ways that the materiality of sickness and dying produced similar and perhaps more poignant anxieties.

In his official report for the Royal Commission on typhoid, W. J. Simpson employed a simple yet striking calculation of the cost of the disease. Simpson estimated that at least £3,500,000 was lost as a result of typhoid fever.<sup>81</sup> However powerful such statistics might have been in the hands of British politicians, the intimate stories of war, of typhoid corpses stuffed into lavatories, often served as more potent reminders of the limits of imperial strength. Typhoid had the power to emasculate British soldiers, as Conan Doyle had noticed, just as it did the imperial idea, which the war brought into sharp relief in the press. But, as

I have argued here, the sick body was not a static symbol of imperial decline. The typhoid epidemic during the South African War produced bodies that were dangerous because of their liminality. While suffering from typhoid in a field hospital and emitting contagious ‘things’ such as urine and feces, or as a corpse in the soil able to discharge dangerous microbes, soldiers’ bodies became abject in South Africa. Liminal bodies thus reflected a liminal state of the British Empire. So prescient was this idea that some even found humor in it. In 1901 the *Umtata Herald* published a story of ‘A Tommy, Private Smith’ who was suffering in an enteric ward, ‘lying in a comatose condition’ and pronounced dead by the doctor. As the orderlies were taking the corpse on a stretcher to the mortuary, Smith sat up, to which the nurse replied ‘the doctor says you are dead, Smith, and he ought to know best. If you wish to make a complaint you must do so at the mortuary.’<sup>82</sup> Here, the fear of a reanimated corpse is offset by the humor of mismanaged bureaucracy. Such irreverence should not discount the fear that typhoid corpses produced in British minds during the South Africa War. In his war diary, William Sydney Inder, a St. John Ambulance orderly in Bloemfontein, attributed the case of one typhoid patient, a Cape Medical Staff who had been captured by the Boers, ‘called to a burial party, blindfolded’ and forced to bury corpses ‘which had been lying five days in the sun, swollen double their nature size’.<sup>83</sup> Inder only explained the actual cause of the sickness as from a ‘terror’.

The contagious corpse was not remade in South Africa alone. Rather, it was product of two contemporary discourses in the late 1890s: increased bacteriological specificity over the role of microorganisms in spreading infectious diseases and a newly articulated fear of reanimated corpses in popular culture. That a dying sick typhoid body could sow the seeds of an outbreak was not an uncontroversial etiological claim in late Victorian public health. Yet, during the exigencies of war in South Africa at a time of intense scrutiny of the direction of the Empire, the contagiousness of the dying body of the sick was extended to the abject body of the corpse, remaking the former as corpse-like just as it made the latter reanimated, more life-like. Burdett-Coutts’ anecdote about a typhoid corpse being stuffed into a lavatory thus represents much more than a passing story with doubted origins, a window into the management of the war. Real or imagined, the sick typhoid body and the typhoid corpse were at the center of meaning making and contestation for the larger British body politic. The experiences and practices in South Africa as

well as the popular consumption of stories of the conflict reanimated the idea of the corpse. Diana Fuss has argued that the Enlightenment saw the dead body transformed ‘from an object of religious veneration into one of scientific experimentation’.<sup>84</sup> It also became a symbolic critique of imperialism.

## NOTES

1. P. T. Ross, *A Yeoman's Letters from the Boer War* (London: Simpkin, Marshall, Hamilton, Kent, 1901), p. 88.
2. W. Burdett-Coutts, *The Sick and Wounded in South Africa: What I Saw and Said of Them* (London: Cassell & Co., 1900), p. 57. See also Hansard, 29 June 1900, vol. 85, cols 104–126.
3. W. Burdett-Coutts, letter dated 18 January 1900, in *The Sick and Wounded*, p. 3.
4. W. Burdett-Coutts, ‘Our Wars and Our Wounded’, *The Times* Saturday 24 March 1900, issue 36098, p. 6.
5. Anon., ‘The Addresses to Their Constituents Sent Out’, *The Times* 21 September 1900, issue 36253, p. 7. On the anti-war movement in British popular culture see M. Van Wyk Smith, *Drummer Hodge: The Poetry of the Anglo-Boer War* (Oxford: Oxford University Press, 1978).
6. Kenneth O. Morgan, ‘The Boer War and the Media (1899–1902)’. *Twentieth Century British History* 12:1 (2002): 1–16, p. 2.
7. *Ibid.*, p. 9.
8. Anon., ‘Medical Aspects of the War’. *British Medical Journal* (7 July 1900): 51.
9. W. Burdett-Coutts, ‘Our Wars and Our Wounded’, *The Times* 27 June 1900, issue 36179, p. 4.
10. Theodore Porter, *The Rise of Statistical Thinking* (Princeton: Princeton University Press, 1988).
11. Burdett-Coutts, ‘Our Wars and Our Wounded’, 27 June 1900, p. 4.
12. *Ibid.*
13. See also W. Burdett-Coutts, *The Sick and Wounded*, p. 8. For a critique of Burdett-Coutts, see, for example, A. G. Asph, ‘The South African Hospitals Enquiry’, *The National Review*, vol. 37 (London: Edward Arnold, 1901), pp. 39–44.
14. Royal Commission on South African Hospitals, *Report of the Royal Commission Appointed to Consider and report Upon the Care and Treatment of the Sick and Wounded during the South African Campaign* (London: HMSO and Wyman & Sons, 1901), p. 87.
15. *Ibid.*, p. 44.

16. *Ibid.*, p. 256.
17. *Ibid.*, p. 261.
18. *Ibid.*, p. 361.
19. *Ibid.*
20. *Ibid.*, p. 44.
21. William Burdett-Coutts, 'The South African Hospitals', *The Times* 13 February 1901, issue 36377, p. 11. Coutts did forward to the head to the commission the name of his informant.
22. Royal Commission, *Report*, p. 3.
23. Bernard Porter, *Critics of Empire: British Radicals and the Imperial Challenge* (London: Macmillan, 1968).
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25. Anne Hardy, *Health and Medicine in Britain Since 1860* (Basingstoke: Palgrave, 2001), pp. 48–49.
26. Vincent Cirillo, *Bullets and Bacilli: The Spanish American War and Military Medicine* (New Jersey: Rutgers University Press, 2004), p. 138.
27. Historians have often pointed to the 1904 Committee on Physical Degeneration, and the significant number of recruits turned away at urban centers such as Manchester.
28. For an overview of 'imperial gothic' British literature see Patrick Brantlinger, 'Imperial Gothic: Atavism and the Occult in the British Adventure Novel, 1880–1914' in his *Rule of Darkness: British Literature and Imperialism, 1830–1914* (Ithaca, NY: Cornell UP, 1988), Chap. 5, and Andrew Smith and William Hughes, eds., *Empire and the Gothic: The Politics of Genre* (Basingstoke: Palgrave, 2003).
29. On military medicine and masculinity in Britain during World War I, see Ana Carden-Coyne, *The Politics of Wounds: Military Patients and Medical Power in the First World War* (Oxford: Oxford University Press, 2014).
30. Philip Curtin, *Disease and Empire: The Health of European Troops in the Conquest of Africa* (Cambridge: Cambridge University Press, 1998), p. 212.
31. *Report of the Commission on the Nature, Pathology, Causation, and Prevention of Dysentery, and its Relationship to Enteric Fever* (London: Harrison & Sons, 1903), p. 62.
32. Anon., 'Is Kipling Verily the Voice of the Hooligan?' *The Literary Digest* 20:4 (1900): 113.
33. George Turner, Medical Officer of Health for the Transvaal, writing in 1902, noted that there was widespread public support in South Africa

- that typhoid could be spread by dust, which he condemned on epidemiological evidence as the 'lazy man's excuse'. The public fear over dust as a disease medium in Africa and India, however, further cements Kipling's coupling of the disease and the African environment. See George Turner, 'Typhoid Fever in South Africa: Cause and Prevention'. *British Medical Journal* (15 February 1902): 381–383.
34. Rudyard Kiplin, "The Parting of the Columns," in *The Five Nations* (London: Methuen, 1903), 175–178.
  35. Warwick Anderson, *Colonial Pathologies: American Tropical Medicine, Race, and Hygiene in the Philippines* (Durham: Duke University Press, 2006), p. 132.
  36. Arthur Conan Doyle, *The War in South Africa: Its Causes and Conduct* (London: Smith, Elder, 1902), pp. 96–97
  37. Almroth Wright, Professor of Pathology at Netley, had only developed the typhoid vaccine in 1896; it had been in trial for two years at a mental asylum in Kent. Philip Curtin argues that only about 4% of British troops were inoculated. For more, see Anne Hardy, 'Straight Back to Barbarism: Anti-Typhoid Inoculation and the Great War, 1914'. *Bulletin of the History of Medicine* 74:2 (Summer 2000): 265–290.
  38. Arthur Conan Doyle, 'A Glimpse of the Army', *The Strand Magazine*, September 1900.
  39. Arthur Conan Doyle, *Memories and Adventures* (Cambridge: Cambridge University Press, 1924), p. 162.
  40. *Ibid.*
  41. A. Bowlby, et al., *A Civilian War Hospital* (London: John Murray, 1901), p. 82.
  42. Conan Doyle, *Memories and Adventures*, p. 163.
  43. *Ibid.*
  44. *Ibid.*
  45. Edward P. Lowry, *With the Guard's Brigade from Bloemfontein to Koomati Poort and Back* (London: Horace Marshall & Son, 1902), p. 37.
  46. Edward Klein, 'Report on the Fate of Pathogenic and other Infective Microbes in the Dead Animal Body', *Twenty-Eighth Annual Report of the LGB, 1898–1899, Supplement Medical Officer* (London, 1899), pp. 345–349.
  47. Worboys calls such figures 'protobacteriologists'. See Michael Worboys, *Spreading Germs* (Cambridge: Cambridge University Press, 2000), pp. 215–216.
  48. William Bulloch, Obituary for E. E. Klein, *Journal of Pathology and Bacteriology* 28 (1925): 684–697, p. 696.

49. Stephen Paget, *Experiments on Animals* (London, J. Murray, 1903), p. 307, and anon., 'News of the Week', *The Spectator* 22 October 1898, p. 547.
50. Klein, 'Report on the Fate', p. 372.
51. William Tebb, who started the Anti-Premature Burial Society, was perhaps the most outspoken in Britain. See William Tebb, *Premature Burial and how it may be Prevented* (London: S. Sonnenschein & Co., 1896). On how late Victorian physicians used gothic language in thinking about germs see Martin Willis, *Vision, Science and Literature, 1870–1920: Ocular Horizons* (Abingdon, UK: Routledge, 2011), p. 24.
52. On the Victorian fascination with corpses see Eva Ahren, *Death, Modernity, and the Body: Sweden 1870–1940* (Woodbridge, UK: Boydell & Brewer, 2013), Chap. 5.
53. Klein, 'Report on the Fate', p. 344.
54. *Ibid.*
55. G. V. Poore, 'The Milroy Lectures on the Earth in Relation to the Preservation and Destruction of Contagia'. *British Medical Journal* (4 March 1899): 525–529.
56. *Journal of the Pasteur Institute* (February 1897).
57. Sidney Martin, 'Preliminary Report on the Growth of the Typhoid Bacillus in Soil' in *Twenty-Sixth Annual Report of the Local Government Board, Supplement Containing the Report of the Medical Officer for 1896–1897* (London: HMSO, 1897), pp. 231–242. For more on Martin, Klein, and Houston, see Jacob Steere-Williams, 'Performing State Medicine During Its "Frustrating" Years: Epidemiology and Bacteriology at the Local Government Board, 1870–1900'. *Social History of Medicine* 28:1 (2015): 82–107.
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60. Royal Commission, *Report*, p. 211.
61. Diary of Anthony A. Bowlby, Senior Surgeon to the Portland Hospital, Wellcome Library, London, GC/181/C/2.
62. A. Bowlby et al., *A Civilian War Hospital* (London: John Murray, 1901), p. 36. On contemporary disinfection practices in Britain, and particular

- the notion of surveillance, see Graham Mooney, *Intrusive Interventions: Public Health, Domestic Space, and Infectious Disease Surveillance in England, 1840–1914* (Rochester: Rochester University Press, 2015).
63. Emily Jane Wood, Boer War Nurse's Journal, Wellcome Library, London, MS 6034.
  64. Bowlby et al., *A Civilian War Hospital*, p. 37.
  65. *Ibid.*, p. 70.
  66. Sir William Church, comments from Howard Tooth, 'Some Personal Experiences of the Epidemic of Enteric Fever among the Troops in South Africa, in the Orange River Colony' in *Transactions of the Clinical Society of London*, vol. 34 (London: Longmans, 1901), pp. 81–143, 121.
  67. London School of Hygiene and Tropical Medicine, *Report of the Commission on the Nature, Pathology, Causation, and Prevention of Dysentery, and its Relationship to Enteric Fever* (London: Harrison & Sons, 1903), p. 59.
  68. Fawcett Commission, *Report on the Concentration Camps in South Africa Commission* (London: HMSO, 1902), pp. 15–16. For more on the commission, and particularly a comparison between its findings and the earlier reports by Emily Hobhouse, see Birgit Seibold, *Emily Hobhouse and the Reports on the Concentration Camps during the Boer War, 1899–1902* (Stuttgart: Ibidem-Verlag, 2014). Boer women were likewise, as historian Rod Edmond has shown, castigated as contagious for their enticing of British soldiers into sex. See Rod Edmond, *Leprosy and Empire: A Medical and Cultural History* (Cambridge: Cambridge University Press, 2006), p. 189.
  69. Fawcett Commission, *Report*, pp. 68–69.
  70. Quoted in Jenny de Reuck, 'Social Suffering and the Politics of Pain: Observations on the Concentration Camps in the Anglo-Boer War 1899–1902'. *English in Africa* 26:2 (October 1999): 75. On the public memorializing of the concentration camps, see Liz Stanley, *Mourning Becomes: Post/Memory, Commemoration and the Concentration Camps of the South Africa War* (Manchester: Manchester University Press, 2006).
  71. Howard Tooth, 'Enteric Fever in the Army in South Africa, with Remarks on Inoculation'. *British Medical Journal* (10 November 1900): 1368.
  72. Robert Caldwell, *Military Hygiene* (New York: William Wood, 1905), p. 30.
  73. Sir William Church, comments on Tooth, 'Some Personal Experiences', pp. 81–143, 121.
  74. Caldwell, *Military Hygiene*, p. 30.
  75. Tooth, 'Some Personal Experiences', pp. 81–143, 132.
  76. *Ibid.*

77. Letter from John J. Boyd to W. C. C. Pakes, dated 14 October 1905. National Archives of South Africa, Pretoria, National Archives of South Africa, Pretoria CPL 29. Before moving to South Africa Pakes had been Demonstrator of Sanitary Science and Bacteriology at Guy's Hospital.
78. Letter from W. C. C. Pakes to John J. Boyd, dated 16 October 1905. National Archives of South Africa, Pretoria, CPL 29.
79. E. A. Roberts, *Enteric Fever in India and in other Tropical and Subtropical Regions*, (Calcutta: Thacker, Spink & Co., 1906), p. 543.
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81. London School of Hygiene and Tropical Medicine, *Report*, pp. 98–99.
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83. W. S. Inder, *On Active Service with the S.J.A.B* (Kendal: Atkinson & Pollitt, 1903), p. 97.
84. Diana Fuss, 'Corpse Poem'. *Critical Inquiry* 30:1 (Autumn 2003): 1–30, p. 3.

# Suspicious Corpses: Body Dumping and Plague in Colonial Hong Kong

*Christos Lynteris*

On 13 May 1903 Li Sun, contractor of 31 Hollywood Road, Hong Kong, was arrested alongside a number of his ‘fokies’ by Sergeant Dymond for a curious crime: lodging the corpse of a seventeen-year-old boy in a closed cement barrel. Under the title ‘Plague Body Passed as Cement’, the following day’s *China Mail* commented that ‘The dodge was a very clever one, and they succeeded in taking the corpse up to the Peak from the contractor’s house.’<sup>1</sup> Upon a swift court hearing, Li was charged and found guilty not for murder, but for removing the corpse and not reporting the boy’s death to the authorities. The penalty imposed upon the contractor was 200 Hong Kong dollars (or two months of incarceration), whereas the ‘fokies’ were discharged. Rather than being an isolated journalistic curio, this story formed part of what, following Robert Peckham, we may call a colonial ‘epidemic panic’ concerning Chinese corpses in Hong Kong at the turn of the century.<sup>2</sup> The panic related to British efforts to control bubonic plague in the Crown Colony, a public health objective that in many ways encapsulated

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both symbolically and administratively the much more general goal of achieving a status of ‘hygienic modernity’ for Hong Kong.<sup>3</sup>

The aim of this chapter is to explore the Hong Kong medical and administrative authorities’ fascination with and concerns about the so-called ‘body dumping’ of plague victims at the turn of the nineteenth century. It focuses, on the one hand, on the transformation of this concern over the long years of recurrent plague outbreaks in Hong Kong, and, on the other hand, on the way that this became entangled with British–Chinese dynamics in the colony. My aim is to show that in the course of the epidemic crisis the dumped plague corpse functioned as a locus of epistemic and governmental investment and problematization, but also, and most pertinently, that it acted as an aporetic and at the same time productive locus of colonial relations. In particular, this chapter examines how British concerns regarding body dumping in Hong Kong led to a heated debate on the explanation and resolution of the phenomenon both among colonial authorities and between them and Chinese elites. Rather, however, than reproducing tug-of-war visions of colonial power and native resistance, what this particular history of ‘post-mortem contagion’ points at is the emergence of a common semantic and performative ground of opposing agents embroiled in epidemic crisis: culture. As an epistemic object, the dumped body of plague victims fermented a heated debate on the nature of the pathogen and its etiological and epidemiological profile—broadly speaking, its disease ontology. As a political object, it was equally productive of destabilizations and re-negotiations of ‘Chinese character’—in other words, the customs, habits, and proclivities that supposedly constituted the cultural identity of the Chinese.

### PLAGUE IN HONG KONG

Hong Kong experienced its first bubonic plague outbreak in the spring of 1894, when the disease, possibly derived from the south-west Chinese province of Yunnan, struck the colony with devastating consequences. Besides the enormous human and economic cost, the epidemic fueled a wide range of rifts in the colony: within the colonial medical officialdom, between international bacteriologists operating on the ground, as well as between the colonial administration and Chinese elites. The crisis thus stands today as a historical exemplar of the multilayered societal and political impact of plague outbreaks across global ports at the turn

of the century.<sup>4</sup> Importantly, in the summer of 1894, the Pasteurian doctor Alexandre Yersin succeeded in isolating the plague pathogen, a gram-negative bacillus that now bears his name, *Yersinia pestis*.<sup>5</sup> This was in spite of concerted efforts by the British medical administration to obstruct his work and his having only recently arrived from French Indochina. In the following years, plague would spread to India and thence to the rest of the world, forming what we now call the third plague pandemic, a global epidemic that, between 1894 and 1959 (when it was officially declared over by the WHO), cost the lives of twelve million individuals and established endemic foci of the disease, which are still active today, in Africa and the Americas.<sup>6</sup> During that period, the disease continued to afflict Hong Kong, where it became an annual spring-to-summer phenomenon until the mid-1920s, leading to thousands of deaths, mainly among the Chinese community.<sup>7</sup> While historians have primarily focused on the 1894 outbreak and, to a lesser degree, on the South China rural outbreaks preceding it, little attention has been paid to the persistence of the disease in the colony itself.<sup>8</sup> And yet this annual phenomenon was quickly established as a field of emergence of important epidemiological questions and practices as well as of biopolitical dynamics that led to the physical and social transformation of Hong Kong.

Crucially, from the very first weeks of the initial outbreak in 1894, plague confronted colonial authorities with a question of corpse disposal. Soon after the start of the epidemic, a special cemetery was designated for plague victims near Kennedy Town, the Chinese-inhabited neighborhood on the west side of Hong Kong Island where one of the plague hospitals operated during the course of the epidemic. Another cemetery was opened soon after for the same purpose inside the Chinese Mount Davis Cemetery, near Sandy Bay. The latter would be the destination of all plague corpses after the last week of May, where they were subjected to what the leading colonial medical officers Ayres and Lowson deemed to be 'scientific burial'.<sup>9</sup> Europeans dying of the disease were, on the other hand, buried at a special plot in Happy Valley, the long-standing cemetery ground for colonials. As for Roman Catholic members of the Chinese community, a specially allocated burial ground was provided in Kennedy Town. In all cases, corpses were buried in quicklime at a depth of seven feet, with no non-plague-related corpses allowed on site. After the end of the epidemic, the original plague cemetery in Kennedy Town was 'covered over with several feet of earth [...] and walled up in' with the intention to covering it up with cement, so as 'to prevent any tampering by the Chinese'.<sup>10</sup>

The management of plague burials was a complex one, as it involved pressing epidemiological and administrative questions, including the maintenance of civil order in the course of the outbreak. In particular, plague burials posed an open question related to the mode of generation and transmission of the disease. At first, colonial medical officers saw plague as miasmatic, and even after the discovery of its causative bacterial agent it was suspected to be carried by the soil.<sup>11</sup> Could this mean, it was often asked, that the ground in which plague corpses were buried was prone to infection and in turn be infectious in itself? Equally important was the notion that plague could be carried and transmitted in the form of fomites on the clothes of the deceased.<sup>12</sup> Such questions would continue to be discussed across the world, wherever plague struck in its global pandemic trajectory, even after Paul-Louis Simond's indictment of the rat and its fleas as the prime vectors of the pathogen, or, much more importantly in terms of contemporary perceptions, following John Ashburton Thompson's demonstration of the rat-human plague connection in Sydney.<sup>13</sup> Rather than bringing about some ontological stabilization, the main effect of the bacteriological identification of plague was the epidemiological unsettlement of the disease, opening up all sorts of scenarios regarding how it was transmitted between and preserved within humans, animals, and objects.<sup>14</sup> In the context of the problematization of the connectedness between outbreaks across the globe, epidemiological reasoning in each affected location was shaped both by institutional priorities, protocols, and ambitions, and by prevailing socio-economic and political conditions. In this respect, plague burials formed an important agonistic terrain, as, on the one hand, doctors and administrators did not agree on what constituted a scientific or sanitary burial, and on the other hand such burials did not always allow for the performance of the religious or civil rites of the afflicted community.<sup>15</sup>

In the case of the initial outbreak of plague in Hong Kong, the idea that to allow the Chinese autonomy over the management of plague burials would jeopardize public health in the colony was quickly matched by the reality that, as daily deaths quickly multiplied, it was no longer possible to give individual care to the victims' corpses. As a result, coffins had to be buried in trenches, a practice that in some cases disallowed relatives from caring for their dead.<sup>16</sup> This soon gave rise to rumors that the victims were interred without a coffin in unmarked graves, which only further fueled practices of corpse concealment or individuals attempting to transport the corpses of their relatives across to nearby Canton.<sup>17</sup>

It is tempting to see the phenomenon as a more or less familiar reaction of the colonized when faced with colonizers assuming control of the bodies of their dead. However, rather than succumbing to such historical and anthropological platitude, we need to consider the particular burial crisis within its immediate context. As has been well established in scholarship regarding late imperial China, in the course of the nineteenth century a series of major crises engulfed the human body, and more specifically the human corpse as a material and symbolic unit. These unfolded on many different but (often institutionally) interlinked levels, most crucially, juridical, ethical, and medical. As Jeff Snyder-Reinke has recently argued, in the course of the nineteenth century the Qing state strove ‘to stabilize the corpse either by fixing it or by regulating its movement’.<sup>18</sup> Yet this remained a largely contrived effort, as, in Snyder-Reinke’s reading, it failed to take into account the materiality of the corpse and its social uses or ‘afterlives’ across the empire. Following Ming precedent, the Qing Code penalized a wide range of forms of mishandling of corpses, with body exposition and the uncovering of graves (*fazhong*) being central objects of proscription. This was because the main concern of the law was to create a stable and spatially as well as ritually fixed cadaver, which would allow a seamless process of ancestor veneration and filiality, the ideological cornerstone of imperial rule. Yet the problem with this ritual and juridical ideal, Snyder-Reinke notes, was that, in both material and symbolic terms, ‘corpses did not stay put’: not only did they mean a different thing to different individuals and social groups, but they were equally employed in different ways by them according to diverse sets of situational criteria. As a result, one person’s profit (through grave exposure extortion schemes, for example) would be another person’s pollution.<sup>19</sup> The anxiety of the Qing to stabilize the corpse *vis-à-vis* its material and symbolic mobility was paralleled by a growing medical re-conceptualization. As historians of Chinese medicine have shown, by the end of the seventeenth century, the interment of such human cadavers had become a key part of novel medical pejoratives, as the *qi* emanating from an exposed corpse began to be seen as having pathogenic properties.<sup>20</sup> By the early nineteenth century this had already led to the legislation of burial duties on the part of magistrates in cases of epidemics, with town or village authorities being responsible for burying victims with no surviving relatives.<sup>21</sup> At the same time, this corpse-related etiology was part of a school of medical thought known as the Warm Factor, which became increasingly prevalent across South

China in the second half of the nineteenth century. Indeed, the arrival of plague in Canton and later Hong Kong was more or less concurrent with a surge of the Warm Factor School in the region, with its proponents being vocally present in the contestation of the causes and cures of the disease in the colony.<sup>22</sup> Hence, rather than simply being generic sites of colonial strife, by the time plague struck Hong Kong in 1894, human corpses had been ushered in what Snyder-Reinke calls a 'liminal death-scape', which at one and the same time rendered them vulnerable and public: the epicenters of juridical, ethical, and medical contestation and debate, and a potent field for symbolic and political investment.<sup>23</sup>

To return to the events of 1894, faced with growing suspicion and resistance, colonial authorities were forced to issue a notice certifying that plague victims were all properly encoffined and individually buried with gravestones 'placed on each grave, with a number and the name of the deceased, so that his last resting place may be easily recognized and so that his remains may not be neglected by his surviving relations'.<sup>24</sup> Whether such statements managed to appease communities afflicted by plague is doubtful, with historians agreeing that what led to the ebb of popular resistance to epidemic control in 1894 were in fact extensive concessions to Chinese welfare institutions such as the Tung Wah Hospital to self-manage the outbreak.<sup>25</sup>

With only a short break in 1895, plague began to manifest itself as an annual affliction in Hong Kong (roughly appearing in late spring and receding by early autumn). This led to a noticeable shift in colonial medical concern away from the immediate management of each outbreak as a singularity and towards the understanding and management of plague as what we may call a biosocial pattern. At the same time as being preoccupied with understanding the relation between recurring outbreaks and the presence, importation and circulation of rats in the colony, one of the prevalent concerns of British doctors became the potential infectiousness of human corpses. The idea that cadavers could carry and spread plague was indeed part and parcel of the mytho-historical constitution of plague in European outbreak narratives.<sup>26</sup> From the legendary origin of the Black Death through the weaponization of pestilential corpses in the siege of Caffa (1346) to Étienne Periset's theory that plague originated in the Christianization of Egypt and the abandonment of embalming (which in his mind led to a profusion of corpse-derived, plague-generating putrefying emanations), corpses occupied an important role in the historical imagination of plague.<sup>27</sup> In the course of the third plague

pandemic, such concerns continued to resurface under various epistemic labels and frameworks, particularly reinforced by incidents, such as the one involving Dr. Câmara Pestana in Lisbon (1899), when accidental inoculation in the course of performing post-mortem examination of a plague victim led to the death of medical professionals.<sup>28</sup>

Key to the idea that human corpses may be sources of infection was the already mentioned concern with fomites, and more specifically with the ability of bodily discharges such as pus, feces, or sputum covering the corpse's skin or clothes to retain and spread plague directly to humans, or indirectly through other vectors, such as rats.<sup>29</sup> In the case of Hong Kong, 'body-dumping', as the phrase quickly became standardized in colonial reports and records, was indicted as more detrimental than the equally common practice of corpses left abandoned and unreported in houses after others had fled the premises:

In the latter case, it is known at least where the infection is, but in the former case when the dead body is thrown into the street, all trace of the infected house and clothes is lost and an unknown centre of disease remains with probabilities of infecting others, either then or in the next year's season plague.<sup>30</sup>

In this way, it may be said that, in terms of colonial epidemiological reasoning, body dumping functioned as an explanatory device for understanding and acting upon the imagined cause of infection. For in creating 'an unknown centre of disease', it made plague invisible, thus establishing a realm of unseen causality that spanned space and time. Colonial anxieties about body dumping in Hong Kong were, as a result, entangled with a much broader concern about the so-called 'breeding grounds' of plague: the place, organism, infrastructure, or substance where plague was imagined to lurk unseen during inter-epidemic periods, waiting to resuscitate and attack humans when they least expect it.<sup>31</sup>

Forming part of plague concerns the arrival of the disease in the colony, the first public panic about body dumping in Hong Kong became evident in 1901. Indeed, such was the height of colonial suspicions in the midst of the worst outbreak since 1894 reached that they spilled over to the international press. There the idea that body dumping was a means of avoiding the fumigation of plague-infected houses by the Chinese appears connected to the controversy over the fumigation of San Francisco's plague-afflicted Chinatown—a measure that had

led to resistance among the Chinese population of the town, but to no recorded phenomenon of body dumping on a large scale.<sup>32</sup> Still as far away as Queensland, Rockehampton's daily *Morning Bulletin* confidently described what doctors and media from Australia and Hong Kong all the way to California opined to be a universal cultural characteristic of the Chinese:

They have the strongest possible objections to having their houses fumigated and cleansed, and hence when a man dies he is smuggled out and dumped in the street at night and so it is impossible to trace the house from which the corpse comes. This has doubtless led to the spread of the disease to a very large extent.<sup>33</sup>

In this accusatory narrative, two practices that would in fact appear to be ethically opposed—body-dumping (abandoning one's dead in order to escape scrutiny) and body concealment (hiding one's dead, so as to preserve them from ritually inappropriate burial)—were merged as a common trait pertinent to Chinese 'character'.<sup>34</sup> Dwelling thus on a global entanglement between Sinophobic 'Yellow Peril' discourses and broader racial problematizations of the spread of bubonic plague, colonial suspicion configured corpse concealment and dumping tactics as a cultural continuum that, some believed, 'even more than rats, is a prolific cause of [plague's] spread'.<sup>35</sup>

Official worries about the dumping of plague corpses in Hong Kong reached their first climax until 1903, when a concerted effort to problematize and stop the practice became evident. In a memorandum issued that year, Hong Kong's governor, Henry A. Blake, noted the percentage of dumped plague victims in the course of the colony's annual outbreak, claiming that it had risen from 25.1% in 1898 to 32.7% in 1903 (Table 1). The increase was duly reported in the daily press, where questions about the police's inability to stop this practice were raised.<sup>36</sup> Blake, a keen observer of plague and its consequences, directly attributed the rise in incidents to 'the dread of the disinfecting process as carried out by the Sanitary Authorities'.<sup>37</sup> This, as Robert Peckham has extensively examined, involved both intrusive and destructive operations, including house-to-house searches, fumigation of clothes and domestic articles, scrubbing of furniture with various disinfectants, washing walls with perchlorine mercury, and detainment of occupants until the disinfection process was completed.<sup>38</sup>

**Table 1** Dumped corpses, Hong Kong 1898–1903

<i>Year</i>	<i>Cases</i>	<i>Found in streets or hillside</i>	<i>Percentage</i>
1898	1314	304	23.1
1899	1462	354	24.2
1900	1085	320	29.5
1901	1649	326	19.7
1902	572	198	34.6
1903	1214	397	32.7

*Source of data* Hong Kong Public Records Office, HKRS203-1-25-19

Governor Blake lamented that whereas the whole process was supposed to last for a maximum of two hours, in reality at the peak of the outbreak it took much longer, so much so that occupants lost one or even two days of work, which ‘to the average coolie is not a light matter’.<sup>39</sup> Moreover, the governor noted, rumors of disinfection coolies extracting extortions from occupants in order to not damage their property led to further complaints. To these Blake responded by holding a meeting with the Principal Civil Medical Officer, the Acting Medical Officer of Health, and Chinese members of the Sanitary Board. The result of this meeting was the institution of the appointment, by inhabitants of each health district in town, of a committee, two members of which were to accompany Sanitary Inspectors so as to evaluate any damage caused by the disinfection process. This seemed to have no effect whatsoever on the body dumping trend, which Blake saw as forming part of ‘the passive resistance of the Chinese’.<sup>40</sup> In a paper to *The Lancet*, the colony’s principal civil medical officer, Atkinson, stressed the epidemiological importance of this practice, speculating that the ‘excessively high’ mortality was due to body dumping. But he also raised colonial suspicion to new heights in claiming that since the start of the plague outbreak that year ‘a body of men had been formed who would undertake to “dump” a body, presumably dead from plague, for \$50!’<sup>41</sup> In fact, the economics of body dumping appear to have been more complicated. If we can judge from one of the numerous ‘Dumping Plague Bodies’ short articles in the Hong Kong daily press, this involved several agents, each with different motives: after being apprehended for dumping the body of his son, an inhabitant of Kennedy Town stated that the tenants of the flat above and below him, as well as of the adjoining houses, had given him a dollar each to not report the body. He in turn paid thirty-five dollars to a man to have his son’s corpse dumped in the streets.<sup>42</sup>

It was thus for the first time that body dumping became the subject not only of epidemiological but of wider of biopolitical concern in the colony, in so far as its governor unambiguously saw the practice as giving rise to the question of ‘how far it might be possible to enlist the collaboration of the Chinese inhabitants in the endeavor to deal with annually recurring epidemics of plague’.<sup>43</sup> This discourse coincided with a significant development as regards the problematization of plague burials. In a much-discussed work, written largely in response to questions by Governor Blake, the colony’s government bacteriologist, William Hunter, argued that specially designated ‘plague cemeteries’ were of no value, and that a ‘properly buried’ plague corpse posed no more danger to public health than any other corpse.<sup>44</sup> This he based on ‘facts ascertained by direct observation and experiment’, pointing out that the plague bacterium had no saprophytic properties.<sup>45</sup> Hunter thus dismissed the fear of plague burial grounds as an opinion ‘widely diffused among the laity, and even among a certain class of physicians’ that had ‘been handed down to us by our forefathers’.<sup>46</sup> Evocative as these may be, Hunter argued, they ‘must be relegated to the pre-bacteriological era of our knowledge of infectious diseases’.<sup>47</sup>

Describing the activity of the bacterium in human and animal corpses, Hunter noted that post mortem it multiplies rapidly in the first twenty-four hours, only to get ‘lost in the colossal growth of the numerous saprophytes’ thereafter and finally die.<sup>48</sup> Though he admitted that the longest persistence of the plague bacillus on a dead body was thirty days, the bacteriologist reasoned that studies leading to this result had been conducted exclusively on small animals and that, by contrast, in humans the bacterium would not persist for so long. In spite of Hunter’s recognition of the soil as capable of carrying the bacillus, this was supposedly supported by the fact that the earth around coffins was always free from plague. Furthermore, he argued that in semi-tropical climes like Hong Kong the bacilli were bound to become more rapidly ‘inert’ ‘within a few days after the death of the individual’.<sup>49</sup>

In this way the question of body dumping was radically detached from the questions of scientific burials and of the soil as a breeding ground of plague, so as to come into its own as an autonomous epistemic object.<sup>50</sup> If until 1903 body dumping was largely met by ad hoc administrative penalties, such as fining or flogging offenders, after that year we witness a shift in the overall approach of body dumping; a process that involved an important transformation in a central biopolitical technology: the statistical method used to record cases of the phenomenon.

## THE TABULATION OF BODY DUMPING

The first efforts to tabulate body dumping, as evident in the Hong Kong Public Records Office archives, comprised a rather simple operation of recording and listing the name, location, age, nationality, and gender of the bodies found dumped in the streets of Hong Kong (the final column, 'Remarks', only ever read 'dead') (Table 2). The collection and systematization of these data led to simple calculations, with very little discussion surrounding these in colonial reports or correspondence. The longest comment on record is itself laconic and focused on the ratio of plague victims and bodies dumped during a specific week, with the only comparison made being synchronic, as regards smallpox-related cases: 'For the week ended May 9th there were 98 cases of plague 36 of which were dumped. Of the 11 cases of smallpox, 9 cases from the *S.S. Korea*, 1 from Shawkiwaw, and 1 from Kowloon. None of the 11 cases of smallpox were dumped.'<sup>51</sup>

In 1903 the only comparative statistic concerned the number of bodies found each year and their ratio to the total victims of plague. By contrast, the records under the same title from 1907 ('Weekly Return of Bodies Dumped') present a completely different discursive and biopolitical image. In the monthly schedule of dumped corpses for that year as collected by the Public Sanitation Service of the colony we come across a long list of tables recording and comparing different kinds of data, including but not limited to comparing: bodies dumped aged under and over four years of age (1907); male and female dumped bodies (1905); different data derived from reports (1896–1903); the number of bodies found in land and in water (1893, 1897); the number of dumped bodies infected by plague and smallpox (1905–1906); and the ratio of unclaimed plague-corpses to total number of plague deaths (1897–1906).<sup>52</sup>

This statistical state of the art reflected not simply an accumulative progress in recording cases over the years but a sharp shift in colonial discourse regarding the particular practice. Unlike in the homonymous document from 1903, in 1907 the tables were not simply listed, without commentary, but were rather entwined in an intricate exchange of opinions, arguments, and judgments. Not only were the tables meant to support specific arguments regarding their ability to reflect the causes of the phenomenon and to lead to its resolution—they were also actively discussed and contested by colonial interlocutors on the subject.

**Table 2** Dumped cases of infectious diseases for the week ending the 2<sup>nd</sup> May 1903

<i>Street</i>	<i>Name</i>	<i>Nationality</i>	<i>Sex</i>	<i>Age</i>	<i>Remarks</i>
fd near no 10 Belckers St.	Unknown	Chinese	M	7	Dead
fd opp. No 43 Praya East	"	"	M	40	"
fd near no 20 Staunton St.	"	"	M	2	"
fd "“68”"	"	"	M	3	"
fd opp no 30 Mongkok	"	"	F	10	"
fd on Steps of Lindburst Terrace	Ah Kwai	"	M	40	"
fd near Stable, Pokpulai Rd.	Unknown	"	M	2	"
fd Near temple, Lai Hang Village	"	"	M	30	"
fd opp. 253 Des Voeux Rd cent	"	"	M	40	"
fd opp. No 13 [unreadable] Street	"	"	F	12	"
fd opp no 21 Praya East	"	"	F	10	"
fd on Hillside back of Holland St	"	"	F	22	"
fd on Reclamation grd opp. Govt Co	"	"	M	4	"
fd no 10 Water Lane	"	"	M	11	"
fd in front of 166 Praya East	Lam Pun J.	"	M	30	"
fd foreshore, opp 27 –do–	Unknown	"	F	6	"
fd opp: 45 Bonham Strand E.	"	"	M	30	"
fd Hillside East End Kennedy Rd	"	"	F	15	"
fd Station St Yanmati	Chen Mau	"	M	44	"
fd at Connaught Red near Canton wharf	Unknown	"	M	20	"
fd behind Govt Store	"	"	M	35	"
fd opp. No 32 Upper Station St.	"	"	M	45	"
fd on the alley back of 155 Hollywood Rd	Ma Hau	"	M	22	"
fd on Wenchai Rd No 2 Police Station	Lui Sam	Chinese	M	23	Dead
fd opp: 25 Praya East	Unknown	"	M	35	"
fd opp 34 Station St Mongkok	"	"	F	8	"
fd opp 57 Aberdeen St.	"	"	F	17	"
fd opp 130 Desvoeux Rd.	Li Lee	"	M	32	"
fd at Vacant Ground by [unreadable]	Unknown	"	M	33	"
fd in Cross St opp: 35 McGregor St	Li San	"	M	35	"
fd Hillside, Coffee Plantation	Unknown	"	F	3 M	"
fd opp: 24 Square St.	"	"	F	4	"
fd behind 58 Temple St North Yanmati	"	"	F	20	"
fd Reclamation Ground Desvoeux Rd.	"	"	M	40	"

‘A return shewing the number of dumped cases of infectious diseases for the week ending the 2nd May 1903’. The handwritten table contained an additional column before the ‘street’ column, indicating the date of discovery; due to the binding this is no longer readable; original spelling and punctuation is retained. From a total number of 100 cases: plague, 95; cholera, 2; diphtheria, 1; enteric fever, 1; small-pox, 1; *source of data* Hong Kong Public Records Office, HKRS203-1-24-33

This increased interest may be read in the context of the consolidation of the human corpse as a source of infection, as achieved in W. J. Simpson's landmark *Treatise on Plague* (1905). There, the influential British bacteriologist stated:

In dead bodies the bacilli are found in the affected buboes and generally in the spleen, liver, lungs, bone marrow, bile, urine, peritoneal fluid, and fluid of the brain. It is this universality of the plague bacillus which is the danger attached to corpses and which renders it imperative that special precautions shall be taken immediately death occurs to prevent the spread of the infection.<sup>53</sup>

Simpson's observations that, when kept in the dark, plague cultures may retain their virulence up to two years further rekindled fears that corpses may form long-term reservoirs of the disease, with the author claiming that 'some of the older observations, such as that of a rope used for letting down plague corpses into the grave retaining infection for a long time and causing a fresh outbreak, may not be discarded as impossible'.<sup>54</sup> Most importantly, however, this discussion revolved around the question of whether body dumping was a result of Chinese efforts to avoid house disinfection.

As stated in his report accompanying tables of body dumping for the first three months of the year (dated 6 April 1907), the colonial secretary, Sir Francis Henry May, argued that the number of bodies found cast away during that period, when plague was absent from Hong Kong, testified to the fact that the abominable practice was not related to disinfection evasion, as previously believed.<sup>55</sup> This statement was backed by the secretary's claim a few days later that body dumping had been present before 1894 and should thus not be seen as a plague-related phenomenon. However, May's report did not go uncontested; instead, it caused the violent reaction of the Sanitation Board, which compiled large numbers of comparative data in defense of the opposite opinion: 'in the opinion of the Board the large increase in the number of dead bodies placed in the streets is due to the sanitary measures adopted since 1894 against plague and smallpox'.<sup>56</sup>

According to the same resolution, the means for achieving the termination of the phenomenon was 'by obtaining the assistance of the Chinese' (Resolution 2), adding 'that to obtain the effective co-operation of the Chinese a revision of the bye-laws relating to infectious disease is necessary, and that such a revision is called for on other grounds

as well' (Resolution 3).<sup>57</sup> What was then suspect in the eyes of the Sanitation Board was no longer or primarily the supposedly inherent cultural attitudes of the Chinese *vis-à-vis* anti-plague measures, but the measures themselves and the way they were implemented by the colonial administration.

### NATURALIST TURN

What we may tentatively call the naturalist turn in the colonial understanding and management of body dumping was underlined by a shift in the understanding of 'Chinese culture' or the 'Chinese character' and its interrelation with native responses to plague in the colony. If until 1907 it was assumed that body dumping was a cultural trait of the Chinese—what in Paul Ewald's terms epidemiologists for better or for worse would today call a 'cultural vector'—new colonial discourse stressed the fallacy of this epidemiological reasoning: 'Such inhuman practice is against the custom and tradition of their own country', by which it was generally meant that body dumping violated the basic Confucian rules of ancestor veneration and filial piety.<sup>58</sup>

Rather than being a Chinese 'irrational' response to 'reasonable' anti-plague measures, body dumping was now configured as a profoundly un-Chinese-like behavior, an act going against the very 'character' of the Chinese, to which native subjects resorted only due to forceful and destructive house disinfection. This was an idea endorsed by the Chinese elites, as a series of interventions by Lau Chu-pak, member of the Sanitary Board and of the Tung Wah, co-founder of the Chinese General Chamber of Commerce and influential Hong Kong politician, demonstrate.<sup>59</sup> Writing in April 1907, Lau argued that the introduction of sanitary measures critically disturbed the established autonomy of the Chinese community as regards the burial of its dead. As a result of the imposition of the measures, Lau, argued, any burial had to be preceded by either the corpse being examined by an inspector or by it being taken to the government mortuary for a post mortem. The only exception to this rule was if the said individual had, before passing away, been attended by a European doctor, or licensed practitioner from the Chinese College of Medicine. Moreover, if death had been the result of smallpox or plague, 'the patients, irrespective of age or sex, are forcibly removed from their homes, and their friends or even nearest relatives are prohibited from seeing them'.<sup>60</sup> 'With such measures in force', argued

Lau, ‘naturally the labouring class, who, sharing the floor together, know what affects one of them would affect all, contrive by dumping their dead to escape the trouble and suffering as entailed by the elaborate provisions of the sanitary laws.’<sup>61</sup> Rather than being seen as a cultural response to ‘science’, body dumping was then re-framed as a reaction to administrative measures that broke with the very order of human nature. They were no less than a utilitarian, that is to say ‘natural’ in the eyes of the British colonial elites, act of self-survival.

In a further letter to the Sanitary Board, Lau provided a vivid ethnographic depiction of what he saw as the real cause of body dumping. In it, he described that in the course of ‘the plague season’ measures of vigilance assume extraordinary proportions:

Where qualified medical assistance is not employed, against which the prejudice has not yet been entirely overcome, almost every dead body is carted away, and even in some cases the patient in a moribund state, not actually suffering from plague but with suspicious symptoms, is not allowed to die in peace in his own house.<sup>62</sup>

The result of this was described by Lau as being unambiguously natural rather than cultural: ‘Under such circumstances, hardship and suffering are unavoidably inflicted on the patient and his family, and fright and anxiety caused to his fellow-lodgers and neighbours.’<sup>63</sup> Lau went on to describe the sequence of events upon the bacteriological certification of a corpse as containing the plague bacillus in a powerful narrative, which is worth transcribing at length here:

If on examination by the Government Bacteriologist a patient or corpse is found to be plague-stricken, a constable is detailed to mount guard at his house to prevent the removal of any article and the holding of communication with outside by the inmates until the cleansing gang under a coloured foreman and an inspector arrive a few hours thereafter or sometimes on the following day. Then the contacts are compelled to strip off their own clothes and put on those supplied by the Sanitary Board. Not only the clothes which the contacts are at the time wearing but also those locked up in boxes must be shuffled into large baskets and carried away for disinfection. The scene created by the demolition of partitions and ceilings coupled with the washing of furniture and bed-boards is anything but pleasant. To see the cleansing coolies—whom the people call ‘Rat Kings’ because of their arrogant attitude, throwing the debris about and dashing

in and out with what they have destroyed, while the people themselves in the convict-like garments provided by the Sanitary Board are watching on with sad faces, is very touching.<sup>64</sup>

The Chinese patrician expressed his inability to understand how, 'some of those engaged in the work still have the heart to be rough and bullying'. Was it not the purpose of these operations to prevent the spread of infection? Instead, Lau reasoned, such violence and harshness only helped to spread the disease further 'inasmuch as it has struck awe into the hearts of the Chinese to such an extent as compelling them to devise means at great risk and against the practice of their own race to evade the law by concealing their sick and abandoning their dead'.<sup>65</sup>

This peculiar rapprochement between Chinese elites and the Sanitary Board was part and parcel of a shift in strategies regarding how to put an end to body dumping, which by 1907 appeared to involve one in three plague cases among the Chinese residents of Hong Kong, if not more. As noted in the resolution of the Sanitary Board, the suggested solution was to foster close collaboration between colonial authorities and Chinese elites, including the latter's medical and charitable institutions, in particular the Tung Wah Hospital.<sup>66</sup> Yet this solution was in itself problematic in so far as it raised a key question, obvious to all at the time: if, ever since 1904, the Tung Wah had been active in the creation of Chinese Public Dispensaries whose aim was to limit body dumping, why was it then that the practice had not already been stamped out? How was this failure to be explained and accounted for?

### CULTURAL NORM AND ANOMIE

It is by examining the internal colonial debate on this matter, as contained within the existing public records archives, that we may grasp the anthropological heart of this dispute. When it comes to the colonial secretary's reading of the persistence of the abandonment of corpses in the streets of Hong Kong, what was demonstrated was that all the political and financial support of Tung Wah's dispensaries had proved pointless. As we have already seen, to May's mind this was because the particular phenomenon had nothing to do specifically with plague, but was instead a normative part of Chinese culture as such: epidemic or not, the Chinese were seen as perennial body dumpers. In this, he was supported by other colonial officers, like the Director of Public Works, W. Chatham, who argued against the Sanitary Board's thesis, stressing

that body dumping was a practice employed by the Chinese either to avoid the cost of burial or, if the corpse was that of a child's, to avoid it being buried in a coffin, as this was supposedly held to shorten 'the new life to which Chinese [*sic*] believe all dead will be re-born'.<sup>67</sup> By contrast, the opinion held by Lau and supported by the Sanitary Board was that anti-plague measures struck such fear among ordinary Chinese that the beneficial effects of the dispensaries, the tendency of the Chinese to take avail of Chinese charitable societies' aid, as well as centuries-old Confucian norms of filial piety and ancestor veneration, were practically suspended. According to this narrative, culture snapped under the weight of a natural terror induced by colonial excess.

What can then be said to have unfolded in terms of these opposite colonial framings of body dumping is an antithetical reading of culture's relation to a specific and supposedly disease-spreading practice. On the one hand, we have the colonial secretary's understanding of body dumping as an inherent and *normative part of Chinese culture*, a phenomenon that had nothing to do with plague epidemics or with anti-plague measures, but could be simply described as a trait of the 'Chinese character'. The latter consisted (in the colonial imagination) in fatalism, resistance to change and disregard to suffering. On the other hand, we have the Sanitary Board's (and Chinese elites') understanding of body dumping as a *liminal behavior*, an act that radically violated Chinese custom and tradition, and was the result of terror inflicted on the Chinese community by a series of irrationally harsh, intrusive, and destructive measures. These forced Chinese culture to collapse, caused mores to be abandoned, and resulted in ancient customs being profaned. This was a form of social alienation *in extremis* that led native subjects to adopt what were essentially described as counter-cultural, even anomic, practices. According to the first narrative, colonial support of Chinese charitable societies and structures, such as the Tung Wah, was a waste of time and money, as these were at worst part of the problem and at best incapable of solving it. According to the second narrative, support of these societies was a necessary but not adequate condition for the cessation of body dumping; only the revision of the anti-plague bylaws and the end to sanitary terror could guarantee an end to this peculiar form of anomie and a return to cultural norms.

It was not long before Lau saw his vision of eradicating body dumping being officially adopted. In April 1908, the fine-and-penalty-oriented colonial policy was replaced by one based on incentives (if that is what one may call financial rewards for denouncing neighbors, relatives, and

friends). Offering ten to fifteen Hong Kong dollars to anyone whose information would lead to the arrest of a ‘dumper’, the measure, which was implemented by the colony’s street committees (*kaifong*), was explicitly targeted towards the ‘coolie’ class, for whom the amount equaled more or less a monthly salary.<sup>68</sup> At the same time, a number of public education measures were implemented: by 1909, two lecturers were employed to ‘preach’ against body dumping and to explain the benefits of the Chinese dispensaries. Concurrently, besides the distribution of handbills, photographs of dumped corpses were posted along affected neighborhoods, with the *kaifong* using these to make enquiries about each incident; unfortunately, none of this visual evidence seems to survive.<sup>69</sup> All this was underlined by a marked decrease in the aggressiveness of house-search and disinfection measures. It was thus that in October 1909 victory over body dumping was finally proclaimed at the Hong Kong Legislative Council, where the virtues of co-operation with the Chinese elites were praised. The rapid and large-scale decrease in dumped corpses from 1447 in 1906 to a projected 348 in 1909 was duly attributed to the easing of draconian measures and ‘the substitution of methods less onerous to property owners and involving less interference with domestic privacy in the manner of disinfection’.<sup>70</sup> This, it was stressed, not only restored confidence but also echoed the latest scientific findings as regards the role of the flea in the spread of plague by the Indian Plague Commission.

## CONCLUSION

As much historically prevalent as it is historiographically neglected, body dumping formed an important part of plague-related debates, conflicts, and reforms in the British colony of Hong Kong between 1894 and 1909. These configured a materiality and at the same time an imaginary of the plague corpse as a source of infection, and sought to identify and curtail the social and cultural source of its abandonment on the streets of the colony. As narratives and policies woven around body dumping increasingly assumed a biopolitical form, they contributed not only to the epidemiological re-evaluation of the importance of this practice, but, most importantly, to a re-negotiation of native Chinese and British colonial responsibility with regards to its establishment and proliferation. This negotiation assumed as its central subject no less than Chinese culture with different, equally essentialist, visions of it contesting for the

evaluation of its content and epidemiological impact. One presumed body dumping to be independent of epidemic incidents and a part of ‘Chinese character’; the other promoted an image of Chinese culture as fundamentally opposed to the practice, and native subjects forced into it by brutal colonial anti-plague measures. If the exposed plague-affected corpse in turn of the century Hong Kong inhabited a ‘liminal death-scape’, this was a deathscape defined as much by colonial politics of culture as by the aporetic nature of the human cadaver in the confines of epidemiology.

## NOTES

1. The ‘Peak’ here refers to Hong Kong’s Victoria Peak, at the time the neighborhood of the British colonial elite, and generally seen as a plague-immune area; Hong Kong Public Records Office, HKRS203-1-24-64: From H. E. The Governor of Hong Kong Dated 31st March 1903. — Dumping Dead Bodies.—Concerning a case in which a fine of \$25 was inflicted by the Police Magistrate 31.03.1903; C.S.O. NO. 2711.
2. R. Peckham, ‘Introduction: Reading the Signs’, in *Empires of Panic: Epidemics and Colonial Anxieties*, ed. R. Peckham, pp. 1–21 (Hong Kong: Hong Kong University Press, 2015).
3. R. Rogaski, *Hygienic Modernity; Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2004).
4. M. J. Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York: New York University Press, 2007).
5. A. Yersin, ‘La Peste bubonique a Hong Kong’. *Annales de l’Institut Pasteur* 8 (1894): 662–667; D. J. Bibel and T. E. Chen, ‘Diagnosis of Plague: An Analysis of the Yersin-Kitasato Controversy’. *Bacteriological Review* 40:3 (September 1976): 633–651. On Yersin’s relations with the British see T. Solomon, ‘Hong Kong, 1894: The Role of James A. Lawson in the Controversial Discovery of the Plague Bacillus’. *The Lancet* 350:9070 (5 July 1997): 59–62; R. Peckham, ‘Matshed Laboratory: Colonies, Cultures, and Bacteriology’, in R. Peckham and D. M. Pomfret, eds., *Imperial Contagions: Medicine, Hygiene, and Cultures of Planning in Asia*, pp. 123–147 (Hong Kong: Hong Kong University Press, 2013).
6. Echenberg, *Plague Ports*.
7. The usually stated cut-off point is the small outbreak of 1923, although isolated cases of plague continued to occur until the end of the decade; for an official record of cases see Hong Kong Government Administrative Reports, AR 1929, Medical and Sanitary; however, this document’s count differs from the ones in colonial archives from the years of the said outbreaks.

8. For an examination of the *longue durée* of plague in nineteenth-century South China before 1894 see C. A. Benedict, *Bubonic Plague in Nineteenth-Century China* (Stanford: Stanford University Press, 1996); F. Bretelle-Establet, 'Les épidémies en Chine à la croisée des savoirs et des imaginaires: le Grand Sud aux xviii<sup>e</sup> et xix<sup>e</sup> siècles'. *Extrême-Orient Extrême-Occident* 34 (2014): 21–60.
9. P. B. C. Ayres and J. A. Lawson, *Report on the Outbreak of Bubonic Plague in Hong Kong 1894 to the International Congress of Hygiene and Demography Held at Buda-Pest, 1894* (Hong Kong: China Mail), p. 18.
10. Ayres and Lawson, *Report on the Outbreak*, p. 18; 'Tampering' in this case referred to exhumation, which usually took place seven years after the initial burial. For a general discussion of cemeteries in Hong Kong see T.-K. Ko, 'A Review of Development of Cemeteries in Hong-Kong: 1841–1950'. *Journal of the Hong Kong Branch of the Royal Asiatic Society* 41 (2001): 241–280.
11. C. Lynteris, 'A Suitable Soil: Plague's Urban Breeding Grounds at the Dawn of the Third Pandemic'. *Medical History* 61:3 (June 2017): 343–357. For a discussion of how rats were supposed to catch plague from the soil see Hong Kong Government Gazette GA 1895 no.146; Medical Report on the Epidemic of Bubonic Plague in 1894 (incorporating J. A. Lawson, 'The Epidemic of Bubonic Plague in Hong Kong, 1894', 13 April 1895, pp. 369–422).
12. R. Peckham, 'Hong Kong Junk: Plague and the Economy of Chinese Things'. *Bulletin of the History of Medicine* 90:1 (2016): 32–60.
13. P.-L. Simond, 'La propagation de la peste'. *Annales de l'Institut Pasteur* 62 (1898): 625–687; T. J. Ashburton, 'A Contribution to the Aetiology of Plague'. *The Journal of Hygiene* 1:2 (1901): 153–167
14. Peckham, 'Hong Kong Junk'; also see N. Evans, 'Blaming the Rat? Accounting for Plague in Colonial Indian Medicine'. *Medicine, Anthropology, Theory* (in print).
15. The regulation of plague burials formed an important part of broader British colonial management of the pandemic across the Empire, including edicts prohibiting people other than specialized staff touching plague corpses, and giving powers to local authorities to segregate plague victims from the other dead.
16. House of Commons Parliamentary Papers, C.7944; Colonial reports—Annual. No. 148. Hong Kong. Annual report for 1894.
17. National Archives, CO 129/263; Despatches, War and Colonial Department and Colonial Office: Hong Kong, Original Correspondence. Correspondence, Original. Despatches; CO 14,182 Bubonic Treatment of Chinese, 13 August 1894.

18. J. Snyder-Reinke, 'Afterlives of the Dead: Uncovering Graves and Mishandling Corpses in Nineteenth-Century China'. *Frontiers of History in China* 11:1 (2016): 1–20.
19. *Ibid.*, p. 9. Long-standing imperial failure in standardizing or fixing corpse management related rituals has been further underlined in D. Sutton's two articles in *Modern China* 33:1 (January 2007), 'Death Rites and Chinese Culture: Standardization and Variation in Ming and Qing Times': 125–153 and 'Ritual, Cultural Standardization, and Orthopraxy in China: Reconsidering James L. Watson's Ideas': 3–21.
20. Leung speculates that this well-documented development may be related to the proliferation of epidemics across China at the time. A. K. C. Leung, 'Hygiène et santé publique dans la Chine pré-moderne' in *Les hygiénistes: enjeux, modèles et pratiques*, ed. P. Bourdelai, pp. 343–371 (Paris: Belin, 2001); see also: J. M. Li, 'Contagion and its Consequences: The Problem of Death Pollution in China' in *Medicine and the History of the Body, Proceedings of the 20th, 21st, and 22nd International Symposiums on the Comparative History of Medicine*, Yasuo Otsuka, Shizu Sakai and Shigehisa Kuriyama, eds, pp. 201–222 (Tokyo: Ishiyaku EuroAmerica Inc. Publishers, 1999). For a discussion of the relation of this idea of corpse pathogeny and the rise of the Warm Factor school in understanding epidemics see M. E. Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (London and New York: Routledge, 2011), p. 111.
21. Benedict, *Bubonic Plague*, p. 125.
22. *Ibid.* Benedict has argued that Warm Factor interpretations of plague were more compatible with Western etiological frameworks at the time, as both relied on environmental factors. Indeed, in British colonial understandings of plague in Hong Kong, germ theory and what is broadly coined as 'miasmatic' understandings of the disease generated powerful etiological hybrids that bridged bacteriological and sanitationist agendas. For discussion see M. P. Sutphen, 'Not What, But Where: Bubonic Plague and the Reception of Germ Theories in Hong Kong and Calcutta'. *Journal of History of Medicine and Allied Sciences* 52 (January 1997): 81–113.
23. Snyder-Reinke, 'Afterlives of the Dead'. The impact of the great famine of the 1870s and its horrific death toll should not be underestimated here. For discussion of the mass-scale burial crisis (inclusive of corpse-eating rumors or indeed realities) this brought about see K. Edgerton-Tarpley, *Tear from Iron: Cultural Responses to Famine in Nineteenth-Century China* (Berkeley: University of California Press, 2008).

24. House of Commons Parliamentary Papers, C.7461 C.7545. Hong Kong. Correspondence relative to the outbreak of bubonic plague at Hong Kong.
25. Benedict, *Bubonic Plague*; E. Sinn, *Power and Charity: A Chinese Merchant Elite in Colonial Hong Kong* (Hong Kong: Hong Kong University Press, 2001); P. T. Lee, 'Colonialism versus Nationalism: The Plague of Hong Kong in 1894'. *The Journal of Northeast Asian History* 10:1 (2013): 97–128; R. Peckham, *Epidemics in Modern Asia* (Cambridge: Cambridge University Press, 2016).
26. I am here borrowing the term outbreak narrative from P. Wald *Contagious: Cultures, Carriers, and the Outbreak Narrative* (Durham: Duke University Press, 2008).
27. M. Wheelis, 'Biological Warfare at the 1346 Siege of Caffa'. *Emerging Infectious Diseases* 8:9 (September 2002): 971–975; É. Pariset, *Memoire sur les causes de la peste et sur les moyens de la detruire* (Paris, 1837). See also the Introduction to the present volume.
28. House of Commons Parliamentary Papers, Cd. 748. For general discussion of plague as derived from human corpses see the Introduction.
29. The notion that plague among rats results from the latter consuming the flesh of human plague victims was widely entertained in the first years of the third plague pandemic, and was particularly fostered by the initial reports of plague in Yunnan regarding dogs succumbing to the disease after eating human plague corpses. For discussion see J. Cantlie, 'A Lecture on the Spread of Plague (part ii)'. *The Lancet* 1:3828 (9 January 1897): 85–91. For a critique of this mode of infection see F. G. Clemow, 'Remarks on Plague in the Lower Animals (part ii)'. *The British Medical Journal* 1:2055 (19 May 1900): 1216–1219.
30. W. J. Simpson, *Preliminary Memoranda on Plague Prevention in Hong Kong* (Hong Kong: Noronha & Co. Government Printers, 1902), p. 10.
31. Other such breeding grounds were the soil and the bodies of children, where plague was supposed to attain an attenuated form and persist for long periods before once again becoming virulent. Another epistemic category related to attenuation and persistence was the so-called ambulatory plague or *pestis minor*.
32. San Francisco was first struck with bubonic plague in 1900; for a discussion of Chinese attitudes towards corpses in San Francisco, the implication of Tung Wah Hospital in overseas reburial practices, and conflict between burial rites and sanitary regulations see G. B. Risse, *Plague, Fear, and Politics in San Francisco's Chinatown* (Baltimore: Johns Hopkins University Press, 2012). For a brief but illuminating comparison between San Francisco's Chinatown and Hong Kong with regard to body concealment and body dumping see Anon., 'Concealment of Plague'. *Journal of the American Medical Association* 39:3 (19 July 1902): 142.

33. Anon., 'The Plague in Hongkong', *Morning Bulletin* 24 September 1901, p. 5.
34. For example, the 'notorious' tendency for concealment was blamed for the rapid spread of plague among the Chinese community in Port Louis, Mauritius, in 1900; House of Commons Parliamentary Papers, Cd. 748. On the question of the 'character' in colonial perceptions of plague see D. Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press, 1993); C. Lynteris, *Ethnographic Plague: Configuring Disease on the Chinese–Russian Frontier* (London: Palgrave Macmillan, 2016).
35. Anon., 'Plague Increasing in Hong Kong, Dead Bodies Dumped into the Streets', *Sunday Times* 21 June 1903, p. 8; on plague and the Yellow Peril see N. Shah, *Contagious Divides: Epidemics and Race in San Francisco's Chinatown* (Berkeley: University of California Press, 2001); C. Lynteris, 'Yellow Peril Epidemics: The Political Ontology of Degeneration and Emergence' in *Yellow Perils*, Frank Billé and Soren Urbansky, eds (Honolulu: Hawaii University Press, in print).
36. Anon., 'Dumping Plague Bodies', *The China Mail* 12 March 1903, p. 4.
37. House of Commons Parliamentary Papers, Cd. 1821; Colonial reports—miscellaneous. No. 25. Hong Kong. Bubonic plague. Memorandum on the Treatment of Patients in their own Homes and in Local Hospitals, December 1903.
38. Peckham, 'Hong Kong Junk'.
39. House of Commons Parliamentary Papers, Cd. 1821, p. 5.
40. *Ibid.*, p. 6. Other signs of resistance included rat traps being sprung, as the presence of a plague-infected rat collected by the rat catching teams in one's house resulted in it being disinfected.
41. J. M. Atkinson, 'The Treatment of Plague by Large Doses of Carbolic Acid Given Internally'. *The Lancet* 162:4176 (12 September 1903): 754.
42. Anon., 'Dumping Plague Bodies'. *The China Mail* 17 April 1903, p. 4.
43. House of Commons Parliamentary Papers, Cd. 1821, p. 4. This collaborationist turn may have been influenced by W. J. Simpson's insistence that body dumping could be eradicated if while respecting local custom and religion, responsibility was handed over to the Chinese community; Simpson, *Preliminary Memoranda*, pp.10–11.
44. W. Hunter, *A Research into Epidemic and Epizootic Plague* (Hong Kong: Noronha & Co., 1904). For Blake's questions and correspondence see Hong Kong Public Records Office, HKRS203-1-25-6, From H. E. the Governor of Hong Kong Dated 26th May 1903.—Plague.—As to (1) Danger of Infection from Bodies of those who Die of Plague. (2) Danger of Arising from the Burial of Plague Bodies. (3) Whether a Body Dead of Plague Cast into the Street is a Centre of Infection; 26.05.1903, C.S.O. NO. 4390.

45. Hunter, *A Research*, p. 47.
46. *Ibid.*, p. 46.
47. *Ibid.*
48. *Ibid.*, p. 47.
49. *Ibid.*
50. I am relying here on the notion of the epistemic thing as developed by Hans-Jörg Rheinberger; for a discussion of plague and its epistemic objects in Hong Kong see Lynteris, 'A Suitable Soil'. It should be noted that as of 1904 dumped and unclaimed plague corpses were buried in a specially designated cemetery in Cheung Sha Wan: a Anon., 'Plague Cemetery, Burial of Dumped Bodies', *The Hong Kong Telegraph* 15 September 1907, p. 4.
51. Hong Kong Public Records Office, HKRS203-1-24-33; From Secretary, Sanitary Board of Hong Kong—Plague. —Weekly Return of Bodies Dumped; C.S.O. NO. 1831.
52. Hong Kong Public Records Office, HKRS203-1-27-14; From Capt. Supt. Police of Hong Kong Dated 17th February, 1906. —Bodies Dumped 1905—Monthly Schedules, 17.02.1905; C.S.O. NO. 1350. Note that though this file is dated 1905 it extends to include 1906 and 1907.
53. W. J. Simpson, *A Treatise on Plague; Dealing with the Historical, Epidemiological, Clinical, Therapeutic and Preventive Aspects of the Disease* (Cambridge: Cambridge University Press, 1905), p. 82.
54. *Ibid.*, p. 94.
55. Hong Kong Public Records Office, HKRS203-1-27-14.
56. *Ibid.*
57. *Ibid.*
58. Hong Kong Public Records Office, HKRS203-1-27-14; P. W. Ewald, 'Cultural Vectors, Virulence and the Emergence of Evolutionary Epidemiology'. *Oxford Surveys in Evolutionary Biology* 5 (1988): 215–245; for a critique of the notion of culture vectors see Lynteris, *Ethnographic Plague*.
59. On Lau's wider colonial involvement see G. Ure, *Governors, Politics and the Colonial Office: Public Policy in Hong Kong, 1918–58* (Hong Kong: Hong Kong University Press, 2012); B. Mellor, *Lugard in Hong Kong: Empires, Education and a Governor at Work* (Hong Kong: Hong Kong University Press, 1992).
60. Hong Kong Public Records Office, HKRS203-1-27-14.
61. *Ibid.*
62. *Ibid.*
63. *Ibid.*
64. *Ibid.*
65. *Ibid.*

66. It should be noted here that before 1904 Tung Wah continued its tense plague-related relation with the colonial government; on the question of Tung Wah's authority to remove plague corpses from their homes see Hong Kong Public Records Office, HKRS203-1-24-55, From Actg. Reg: General of Hong Kong Dated 23rd March, 1903—Tung Wah Hospital—Removal of Dead Bodies From—Recommends that it Continue to be Allowed without a Permit. Police on Saturday Arrested Coolies; 23.03.1903, C.S.O. NO. 2371.
67. Hong Kong Government Sessional Papers, SP 1907, Minute by Colonial Secretary on Public Health and Buildings Ordinance Commission, p. 187.
68. Anon., 'The Dumping Evil,' *The China Mail* 22 April 1908, p. 4. It should be noted that Lau participated in the legislation of this reform. This reward may be contrasted to the earlier measure, instituted in 1902, of rewarding with ten dollars anyone reporting an 'authentic living case of plague'; Hong Kong Government Sessional Papers, SP 1902, Reference Table to Professor Simpson's Recommendations. In the City of Victoria the *kaifong* were appointed by the colonial government on the bases of nomination by the Tung Wah; for a discussion of the role of these committees in Hong Kong see J. Hayes, *The Hong Kong Region 1850–1911: Institutions and Leadership in Town and Countryside* (Hong Kong: Hong Kong University Press, 2012).
69. Hong Kong Government Administrative Reports, AR 1909, Registrar General's Department; both the denunciation award and the photographic measure seem to have followed the advice of an earlier anonymous published letter: Anon., 'To Check "Dumping"', *The Hong Kong Weekly Press* 10 June 1907, p. 381.
70. Hong Kong Hansard, HH 1909, Report of the Meeting on 7 October 1909, p. 131; the cases stated here cannot be all plague related, as in 1906 there was a total of 893 plague cases and in 1909 a total of only 135; Hong Kong Government Administrative Reports, AR 1929, Medical and Sanitary.

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# Composing and Decomposing Bodies: Visualizing Death and Disease in an Era of Global War, Pestilence, and Famine, 1913–1923

*Michael Anton Budd*

## INTRODUCTION

This chapter examines the making and circulating of images alongside changing approaches to the corpse, contagion, and the body during times of war, pestilence, and famine, 1913–1923. From postcards and personal snapshots to micrographs and photojournalism, a range of images are surveyed that portray the impacts of death and disease as well as the common patterns and differences that distinguished these crisis events. War, pestilence,

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The research for this chapter began with a paper connecting some of my previous and current work to the themes of the Visual Representations of the Third Plague Pandemic project's 2015 conference *Corpses, Burials, and Infections at CRASSH* (University of Cambridge), and I am indebted to the organizers for inviting me to share my ideas.

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and famine are presented as case studies in the dynamic interchange of culture. Politics, war making, and economic activity, like technology writ large, can seem almost geological in nature and beyond individual control. Until quite recently, the bodies crucial to these processes were largely unproblematized or assumed to be natural. John Keegan's description of war as an act of culture disputed such notions and helped create a space for acknowledging other social forces and considering individuals as embodied agents.<sup>1</sup> Always broad and difficult to define, culture might be thought of as the interplay of multiple perspectives that number as many worlds as there are people, and as the dynamic interaction of events, individuals, and ideas. My purpose is to help develop a comparative view of post-mortem contagion during crisis events in the period as part of a "biologico-social history of the body". The diachronic scope highlights contagion in the contexts of transportation networks, global power relations, climate and conflict.<sup>2</sup> More specifically, accounting for the trajectories of both biological and represented bodies is essential for understanding the characteristic dilemmas of post-mortem contagion inherent in processes of medical investigation, purification, disposal, burial, and remembrance.

The Great War, like famines of the era and the global outbreak of influenza that followed, was shaped by and had an impact on the environment. It afflicted bodies and psyches and inspired humanitarian responses. Rules that once provided some barrier between civilian life and military conflict were abandoned while new ethics and customs were adopted. No longer circumscribed in geographic scale and duration, war could envelop all social life. In turn, the concept of atrocity and war crimes began to develop. It was no longer permissible for those who lived close to a battlefield to follow victorious soldiers in gleaning belongings and collecting teeth from the dead.

In this chapter, I ask how actual bodies were treated, and I discuss more recent developments that are changing the possibilities for studying human remains and using photo archives in the present. The theme of composition/decomposition refers directly to post-mortem contagion, and signals both the centrality of death in human culture, and the regressive and regenerative power of human remains to rekindle the remembrance of life and the traumatic experience of its loss. In addition, this theme refers to specific oppositions and aspects of culture and technology manifest in the period, the power and limits of the mass media and the state in orchestrating a common global reality, as well as the ironies inherent in expanding capacities to both circulate physical ideals and destroy bodies on a mass scale. More practically, the construct of composition

and decomposition undergirds my method and the chapter's structure. The theme is an acknowledgment of the body as an everyday example of the principle of indeterminacy. The only fixed body is the dead body, for in life we are always somewhere in between lived embodiment, the body as material fact, and the idea of the body. The theme is therefore best conceived of as a flexible prompt for asking questions about different processes related to contagion, the corpse, and embodiment.

I begin with the invention of atrocity and a discussion of the crucial role of images in composing a media-orchestrated reality. This created a record of decomposing bodies, but also recomposed life in the face of mass death, thus reestablishing the normative body. In a similar fashion, I examine the frameworks that shaped the composition of scientific views. Next, I turn to actual corpses in geographic space to examine the challenges presented by decomposing remains in varied conditions of war, pestilence, and famine. How were the routines composing normal culture disrupted and how were they modified or abandoned? What traces of this remain in the landscape? These questions are combined with a final focus on the lives of two contemporaries who represent different dimensions of this era. One figure, Dan H. Jones (1875–1954), is introduced earlier in the discussion of scientific imaging. A professor of biology whose work focused on the soil and his microscope, Jones was little known outside the small community he inhabited in Guelph, Canada. The other individual, Colonel Sir Mark Sykes (1879–1919), is first introduced in the lead up to the section on the War Graves Commission. His life was devoted to remapping the globe itself. Famous and accomplished in his own time, his name lives on today through the secret Sykes–Picot agreement, which outlined boundaries for a new Middle East in the wake of the collapsing Ottoman state. By way of these two stories, I compare the global core and periphery, the perspective of the elite aristocrat versus that of a common human, and the contrasting tales of a victim of a crisis and its survivor. In the final section, I offer some reflections on bio-history and the terrain of historical, medical, and archaeological research today.

### VISUALIZING BODIES AND INFECTION

In the first quarter of the twentieth century, people around the world were confronted by a vast number of corpses, resulting not only from the Great War and the subsequent Spanish Influenza pandemic, but also from many lesser conflicts, outbreaks of other infectious diseases,

and recurrent famines.<sup>3</sup> The patterns and conditions that would figure in later events were already apparent at the beginning of the century. Mobilization in 1914 ran on the same railroads that had helped to quickly spread the less deadly influenza outbreak of 1890. From famine in India and Persia to the Russian flu and Russo-Japanese war, a mixture of similar forces was at work connecting bodies, shifting resources, and setting the stage for disease and food crises.

German soldiers coined the term *Verwüstungsschlacht*, emphasizing the ruinous destruction of modern war machines. Commanders like Paul von Hindenburg, who had experienced the Eastern front, saw most clearly the aptness of the term *Materialschlacht* (battle of equipment) to describe the conflict in the West. But as much as the Great War was a war of machines, it was also a conflict between conscripted mass armies, a war of bodies still crucially dependent upon horse-drawn transport (Fig. 1).

Viewing the war as not only mechanized but also organic and driven by animal and human power helps to foreground humanitarian responses and activities like the identification of human remains and medical



**Fig. 1** A war of bodies and machines. A destroyed French tank next to the burnt corpse of a soldier, an uncommon image that could be circulated as a photo postcard but would not have been published in the press. *Source* Author

research on infection and disease. Sometimes called the ‘chemist’s war’, opportunities for research extended well beyond poison-gas protection and treatments for its damaging effects. Efforts in other areas included research on trench related ailments like nephritis as well as on shell-shock and a respiratory illness that may have been related to the Spanish Flu.<sup>4</sup>

Before the war, research activity had been increasing in the broad and varied area of bacteriology.<sup>5</sup> The received tradition automatically linking war, pestilence, and famine was not without basis. In a more connected world, the consequences of interaction, interdependence, and degrees of mutual influence between human activities and nature were being studied more carefully. As part of the occupation of Massawa and efforts to expand beyond Eritrea (a prelude to the First Italo-Ethiopian War 1895–1896), the Italian importation of infected cattle brought rinderpest to the Horn of Africa in 1888. The resulting epizootic spread quickly contributing to the complex set of conditions and causes behind the famines of the *Kefu Qan* (Evil Days) 1888–1892.<sup>6</sup> But systems that might help produce famine or spread infection could also be adapted to lessen their impact or stop them. In 1903 at Asmara the first diagnostic laboratory for animals was created as a result of studies on the impact of rinderpest by an Italian veterinary mission to Ethiopia in 1889. In 1907, as part of reforms made by Emperor Menelik II, a Ministry of Agriculture was initially established with a primary focus on animal health and rinderpest control.<sup>7</sup>

Constructs of contagion and the body as evidence were soon to move beyond the strict confines of medical and scientific research and into the courtroom and the political arena as anatomical and disease metaphors slipped into everyday usage. This was the era when the idea of the body as evidence or truth for the forensic detective was being popularized by daily newspapers through reporting on crimes like the Crippen case (1910) and in popular detective fiction.<sup>8</sup> Like the language of natural selection, ideas about the spread of disease could be easily distorted by eugenicists and others to assert that entire peoples were vile vectors of disease and needed to be purified or eradicated.

The imaging of the body in every aspect was beginning to be established as routine even at the microscopic level. The use of still photography, first in China and later with motion pictures filmed in Africa, had been encouraged by Richard Person Strong to record the full impact of the third plague pandemic.<sup>9</sup> The year before Strong’s tour of Manchuria, Dr. John Lancelot Todd had shown lantern slides of his work in the Congo in Montreal.<sup>10</sup> Early twentieth-century photographic advances

were being matched by developments in photomicrography. Alongside the images resulting from Strong's visit to Manchuria, which included a collection of lantern slides showing the inspection, quarantine, and burning of plague houses, photomicrographs of bacteria were also being shared by researchers in the form of lantern slides at conferences on bacteriology.

Before 1898 there was no common association or means of gathering together the 'large and growing number of investigators who were interested in the biological, agricultural, industrial, as well as the hygienic and pathological aspects of the flourishing young science' of bacteriology.<sup>11</sup> In 1913 and 1914, two articles by Dan H. Jones of the Ontario Agricultural College on a species of soil bacteria, *Azotobacter*, appeared in the *Centralblatt für Bakteriologie*.<sup>12</sup> Jones referred later to the 1912–1913 meetings of the Society of American Bacteriologists where he read 'a paper entitled "A Morphological and Cultural Study of Some *Azotobacter*," using a series of lantern slides of photomicrographs for illustration'.<sup>13</sup> The unwillingness to accept germ theory at mid-century and the later inability of researchers to advance upon early evidence of a novel unconceptualized agent (a filterable virus) emphasized the significance of technology, visualizations of cause and effect, and human preconceptions in science.<sup>14</sup> The uses of photomicrography and X-ray technology similarly highlighted the limits of the view captured by any lens.<sup>15</sup> There was the initial 'hope that the new medium would reveal the world, mirror-like, in its pristine *thereness*, making it available as intimate experience and natural knowledge'.<sup>16</sup> In time, photographs would be seen more as 'substitutes for things and scenes rather than magical mirrors of the world', as more people took their own pictures and the reproduction of half-tone images became commonplace.<sup>17</sup>

### INVENTING ATROCITY

For those at the core of empire the spread of photography seemed to allow for a new mode of self-creation. For many others on the periphery it could be at once a means of disempowerment. It could depict inferiority and it could act as proof of the atrocities being inflicted upon indigenous peoples, from Wounded Knee to the Congo. The line between the two is often brought into sharp focus today in social media, where an image posted by an outsider to show a wrongful act can be objected to by those being wronged as diminishing their humanity or exploiting

them. This is indeed the ultimate truth of the image—that its valence can be changed radically by the biases of its viewers. Photographs of the corpses shattered by Hotchkiss guns from Wounded Knee sold well, for example, and were circulated at first within a culture that largely approved of the massacre. Eventually, the images would take on a life of their own, and, like those taken by Alice Seeley Harris of atrocities in the Congo, would come to be viewed as evidence of genocide.

Hilary Roberts argues that ‘The First World War is the conflict in which the concept of documentary truth first evolved.’<sup>18</sup> The war began with accusations of butchery against the Germans in their sweep through Belgium. Numerous lurid illustrations depicting the rape of Belgium as well as less inflammatory photographs were used to push the narrative of German brutality. On close examination, photographs that were captioned as showing German soldiers marching through Belgium or a group of victims fleeing from the ‘butchers’ failed to contain details that might corroborate such descriptions. There were images showing the very opposite behavior, in which German soldiers shared food with Belgian orphans. The most notorious atrocity claim during the war was the supposed existence of *Kadaververwertungsanstalten*—factories for rendering human cadavers into some sort of useable byproduct. In both cases, the use of photographs was limited to the incidental. Images portraying the depravity of the enemy were more easily provided by cartoonists and illustrators.

### ABSENT AND FRAGMENTED BODIES

In wars and other crises of the period, politicians and officials confronted the problem of managing not only dramatic upsurges of damaged and dead bodies but also the difficulty of controlling an expanding realm of information and images. Press censorship of dead bodies amplified the idea of the absent corpse. There was the body shattered beyond recognition and the feeling of being haunted on the home front by the ghosts of those buried abroad. In the case of the Spanish Flu, corpses even more numerous than those produced by the war were similarly ghostlike and seem to have been quickly forgotten. Conversely, although the bodies of famine victims were erased in some cases, images of human remains as food for the starving and portrayals of victims as living corpses began to be used to mount international appeals for aid. The camera’s function as a truth-telling machine increased in the new century, helping to

call attention to the need for humanitarian assistance and to document atrocities.<sup>19</sup> The power of the camera in this respect was foregrounded during the war by policies adopted by both sides that limited the capture of images.

By the start of World War I, smaller cameras and film formats let professional photographers make images quickly and under difficult light. Eastman Kodak introduced the Brownie in 1900, popularizing amateur photography. The United States did not require photo ID for military personnel until the Second World War. The idea of adding photographs to British military records was first mooted in 1906. In Britain, Scotland Yard purchased its first camera in 1912 to secretly track suffragettes. The collapsible Pocket Kodak, introduced that same year, soon became the most popular camera carried by soldiers.

The French police pioneered photographs for official identification in 1917, but only for foreigners; American soldiers in the Expeditionary Force in France were the only military that had a Carte d'identité during World War I. It was the first conflict in which the common use of cameras by soldiers, nurses, and civilians was possible. As Joanna Bourke notes, these cameras were far from ideal if not 'cumbersome', but several smaller models were developed over the course of the war, like Kodak's vest pocket model with its smaller film size and telescoping accordion body.<sup>20</sup> Bourke and others have noted the dominance of 'official photographs typically portraying British servicemen in chivalric poses'.<sup>21</sup> While it was true that during the war not a single photo of a British soldier's corpse was published by the more established and legitimate daily papers, corpses were not entirely absent from the visual record. Postcards represented a large part of the visual culture of the war and some of these included images of allied and enemy dead. Photos of the dead also appeared in popular magazine format publications like *The Illustrated War News*, *War Illustrated*, *The Canadian War Pictorial*, and *The Great War: The Standard History of the All-Europe Conflict*, published by the Amalgamated Press (Fig. 2).

As the first official photographer to be assigned to the Western Front in 1916, Ernest Brooks began with few reservations about recreating scenes he had witnessed earlier or even posing photographs outright.<sup>22</sup> After being exposed by other journalists for faking photographs, he would not stage photographs again. Britain introduced a policy known as the Propaganda of the Facts, which banned staged or fake images, noting that they undermined Allied credibility. Indeed, many photographs



THE PRICE OF VICTORY: A GRIM CAMERA-RECORD FROM THE ARGONNE.  
The above wonderful, if painful, photograph shows soldiers of our French ally removing their dead and wounded comrades from the trenches in an interval between the terrible fighting in the Argonne. The men had a grim task to perform, but carried it through with reverence for those who had fallen never to fight again, and with an equally marked solicitude for the wounded.

Fig. 2 Removing corpses from trench. *Source* Author

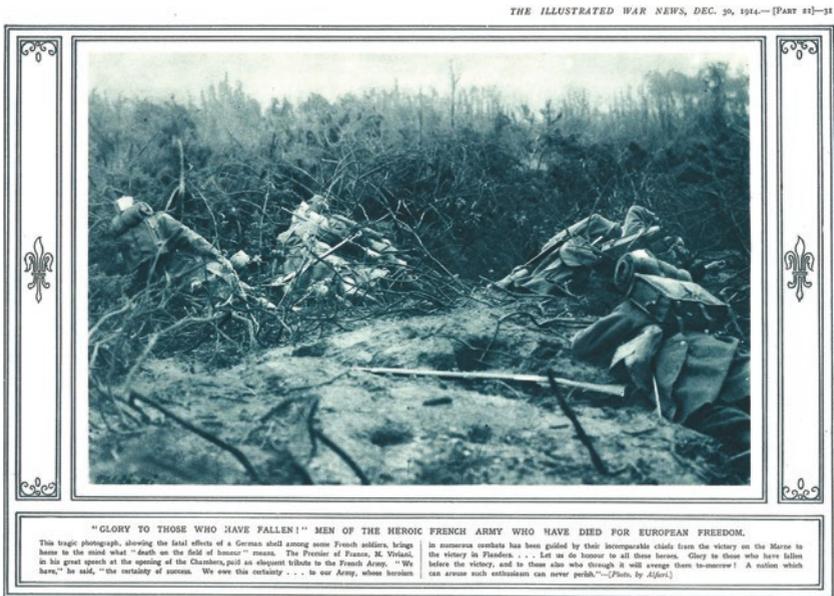
from World War I that have become a part of the historical record do not actually show what the captions purport. Official photographs would show images palatable to the public: a bombed hospital, the service for a Canadian nurse killed in the attack, and subsequent photographs of nurses visiting the grave at Étapes. Some of these images were taken by Tom Aitken from Glasgow. Aitken's photographs are of value for their narrative scope and in so far as they relate to events late in the war: the question of bombing of a protected site far to the rear of the front lines, the lives of women, and the controversy about their value as 'war dead'.<sup>23</sup> A photograph captured 4 August 1918 during a memorial service commemorating the war's beginning offers a view of the network of support behind the trenches. In a stark landscape, tight ranks of uniformed men, nurses, and civilians stand packed in and around fresh grave mounds marked by wooden crosses. The memorial service took place at the present site of Étapes military cemetery. Most soldiers buried in the cemetery died while being treated in the hospitals that once occupied the same space.

Recently published collections of photographs taken by soldiers include those by George Hackney of Belfast and Walter Kleinfeldt, a German soldier who fought at the Somme at the age of just 16. George Hackney brought a small, concealable camera with him when he was called to fight on the Western Front. Many of the men featured in his shots did not survive the conflict and Hackney, who lived into his late 80s, shared his photos with the loved ones of his subjects.<sup>24</sup> In 1977, his collection was donated to the Ulster Museum, but was unseen by the public for over thirty years. On top of the initial 300 images, there could be as many as 200 more still to be found that Hackney gave to families of soldiers killed in the war. Three such photographs of Sergeant James Scott, who was killed in the Battle of Messines in May 1917, were held by Scott's family.

Teenage soldier Kleinfeldt captured the reality of the front line for the German army with his Contessa camera after joining a German gun crew in 1915.<sup>25</sup> His images depict the deadly effects of the machinery of war alongside soldiers enjoying time away from battle. One picture of bodies strewn among the rubble bears his handwritten title 'Nach dem sturm' (after the storm). Another shows young men out of uniform enjoying a swim.<sup>26</sup> These and the photos taken by a nurse at Étapes and other hospital sites who only identifies herself in photos as 'me' widen our view of the conflict beyond the front-line trench by showing mundane scenes

of everyday association and camaraderie. At the same time, we have other images depicting the scenes that inspired government censorship. There are unattributed images like the photo of two dead Scots guards, stripped of their socks and boots, their kilts askew. Or the image of a soldier standing at an embankment and looking back at the camera. He is surrounded by the wounded and dead, and strewn alongside him is a mangled corpse without legs. Finally, there are also the published photos, like that of the French soldiers still burdened by field packs, their bodies scattered around a hole left by an enemy shell (Fig. 3).

From the postcards sent home by soldiers to the lantern slide illustrating a talk on bacteriology by Dan Jones, the accelerating creation and circulation of photographic images in the period complicates the idea that the essential story of photography during the Great War was that of government concealment versus freedom for photographers to reveal the real war. Firstly, photojournalists were not above faking pictures, and, secondly, in such a complex event there were many contradictory



**Fig. 3** Glory to the fallen—men of the Heroic French Army who have died for European Freedom. *Source* Author

and conflicting realities. Every photographic image begs the question of what lies outside the frame. A subject or detail is chosen and others are excluded. Photos, like bodies, are made to mean something; they can be dovetailed to fit with a common assumption or they can be used to contest its veracity. Despite the rules, official photographers were not the only ones taking pictures. We continue to discover that many participants in the war defied the ban on photography and managed to capture a record of their experience. There would be a good many more images to consider if there had been no limitations. But gleaning any truth from such images still requires the painstaking work of verifying details and establishing context.

### THE BODY IN TIME AND SPACE

Barbara Tuchman began her popular history of the Great War, *The Guns of August*, with the image of a corpse borne on a gun carriage.<sup>27</sup> Her description of the deceased Edward VII, other royalty, and heads of state at his funeral on 20 May 1910 gave a nod to the prevailing historiography of the Great War and the linking of its causes to the death throes of the *Ancien Régime*. It signaled her own shift away from the causes of war toward an exploration of its direct impacts on people's lives.<sup>28</sup>

Substantial work has been done since then on the once assumed body that connects the work of historians, curators, archaeologists, and virologists.<sup>29</sup>

Étaples, France, and its hospital tents mentioned above has become a significant site in the search for flu causes for reasons directly related to its geographic position and its many functions and inhabitants during the war. Located near Le Touquet on the Baie de Canche, Étaples was an artist's colony before 1914. Pillaged numerous times in history, it suffered particularly during the 100 Years' War. Today it is a tourist town with unremarkable seaside attractions: boat tours and fishing, the beach, mini golf.

Overcrowded conditions in the camp, with most of the soldiers housed in tents or temporary wooden barracks, were ideal for the spread of a virus.<sup>30</sup> There was a mysterious respiratory infection at the military base during the winter of 1915–1916. The research on the causes of the infection done then relied on techniques inaugurated by Robert Koch for making films from specimens like sputum. Remarkably, in Louis Pasteur's earlier work, which helped to displace the miasma construct of infection and establish germ theory, he only worked with the specimens

themselves and never captured a picture of bacteria.<sup>31</sup> The subsequent emphasis on bacterial causes would lead to many other productive outcomes but would not yield a direct line of progress in establishing the cause of the Spanish Flu.<sup>32</sup> Researchers now suggest the camp in Étaples was at the center of the 1918 flu pandemic or at least home to a significant precursor virus to it.<sup>33</sup> Where some of the hospital tents once stood now lies the Commonwealth War Graves Commission cemetery designed by Sir Edwin Landseer Lutyens. Here, 10,773 dead from the First World War are buried, the earliest dating from May 1915. In contrast to battlefield cemeteries, only 35 of the dead are unidentified, the majority having spent at least some time in the hospitals before eventually succumbing to disease or injury from wounds.<sup>34</sup> Lutyens' grand memorial arches, cross of sacrifice, and non-denominational stone of remembrance mark out a space of order and symmetry giving scale to the sea of headstones against the green grass. The calm composition of this space was recently violated by the red painted slogans of vandals protesting the Iraq war in 2003.<sup>35</sup> Apart from the moment before the red paint was washed away, it would be difficult to compose a shot that upsets the lofty intentions of the design, parts of which were based on studies of the Parthenon.

Étaples was emblematic of changes in medical technology, geographic scale, and levels of violence, as well as shifts in the manner of identifying and commemorating the dead. It was a training base, a depot for supplies, a detention center for prisoners, and a crucial site for the treatment of the sick and wounded, with almost twenty general hospitals. At its peak in 1917, the camp housed over 100,000 people; its hospitals could treat 22,000 patients. Wilfred Owen and Siegfried Sassoon were both at Étaples for periods of the war. Wounded in April 1918, C. S. Lewis was also hospitalized at Étaples. Vera Brittain served as a Voluntary Aid Detachment Nurse there during the war.

The virologist Sir John Oxford was the first to pose a causal argument that linked the influenza pandemic to the massive operational training and medical facilities at Étaples.<sup>36</sup> Oxford also led the lengthy and well-publicized campaign to exhume the body of Sir Mark Sykes eighty-nine years after his death from Spanish Flu during the Paris Peace Treaty conference.<sup>37</sup> As noted above, the contrasting perspectives and lived experiences of Sykes and his contemporary Dan Jones give a sense of human scale that illuminates the global scope and complex dimensions of the era. Sykes role as a privileged actor on the world stage was

based upon his place in society. He shared with Jones an appreciation for the soil, albeit from the position of being a great landowner. Like his grandfather, the fifth baronet of Sledmere, he was a horse breeder with a practical interest in agriculture and the laborers on his estate. He was commissioned into the 3rd (Militia) Battalion of the Green Howards in 1897, served in the Boer War, and was prescient enough to recognize the continued value of horse-drawn transport in any coming war. In 1912 he gained permission to raise the Wagoners Special Reserve as a Territorial Army unit. He was elected MP for Hull before inheriting the baronetcy in 1913, and some of his last activities in Yorkshire were taken up with converting an Eleanor Cross to memorialize local men killed in the war and erecting a monument of his own design commemorating the Wagoners.<sup>38</sup> In contrast to the chivalric poses of the brass plates added to the cross the tribute to the men of the horse drawn reserve includes depictions of fighting and German atrocities.<sup>39</sup>

Sykes died on 16 February 1919, in Paris.<sup>40</sup> Less than a decade after the funeral of Edward VII, Sykes' demise prompted another procession with a gun carriage and corpse. On Tuesday 25 February 1919 the deceased's charger, Punch, saddle empty and boots fixed in the stirrups, led the funeral march.<sup>41</sup> Sykes was mourned in his home county and around the world; a local Yorkshire paper noted a new type of funerary honor: 'Aeroplane Flies Over the Stately Cortège'.<sup>42</sup> It was an apt honorific for Sykes: 'Before World War I brought aerial photography to the mapmaker's art, seeing a nation whole was not as simple as looking at a picture. It was an act of imagination.'<sup>43</sup> His lively imagination, fueled by voracious reading and travel from an early age, contributed in part to the legacy of the Sykes–Picot agreement for which he is still known today. A typical victim of the flu, being part of the age group hit hardest by the pandemic, he was in almost every other way extraordinary. Like Gertrude Bell and his colleague in the Arab Bureau, T. E. Lawrence, he was an Orientalist in the tradition of Richard Burton. In 1899, though still an undergraduate, he published descriptions of some of his travels in the Near East. He was a crusader for humanitarian aid who embodied the altruism and self-serving paternalism inherent in the subsequent evolution of approaches to development. In that same year, images of 'living corpses' produced by late nineteenth-century droughts and famines and made worse by colonial policy were published in *Cosmopolitan* magazine.<sup>44</sup> Not long after, Sykes' entry into public life was marked by his appeal, published in *The Times*, for relief in 'Jumabala' (present-day Blagoevgrad, Bulgaria), to where he had recently traveled following a devastating earthquake on 4

April 1904. Amateurish though he may have been, his attempts to understand and manage the calamitous forces reshaping the world whether practical or visionary were always humane in spirit.

Lawrence gave a backhanded tribute to his friend's energy, enthusiasm, and persuasive charm in the assessment of Sykes as the 'imaginative advocate of unconvincing world movements ... a bundle of prejudices, intuitions, half-sciences'.<sup>45</sup> The last phrase could have been applied to many others in the early twentieth century, if not to Lawrence himself. His words resonate with the idea of the Victorian gentleman-amateur and suggest the contradictions in Sykes that made him representative of his times. Ultimately a victim of the connectivity that was transforming the world around him, he was nonetheless its champion.

On the day of Sykes' death, the first air travel of diplomats from London to the Paris took place, and an agreement prolonging the Armistice was signed. As the steamer *Leviathan* sailed from lower Manhattan with relief workers bound for the Near East, the genocide documentary *Ravished Armenia* premiered in New York City. The next morning the recovery of remains and identification work recommenced on the now-silent Western Front.

Due to extreme cold, the recovery work had stopped in early January 1919. The First World War was over, but the task of clearing battlefields and identifying remains continued for many soldiers until 1921. Some confronting the grim task were newly arrived on the continent and had never seen battle. The Imperial (later Commonwealth) War Graves Commission and individual governments continued the work into the next decade—28,036 bodies were found between 1921 and 1928 (with 25% identification) and approximately a further 10,000 up to 1937.<sup>46</sup>

Ariela Freedman argues that while

there had already been critical changes in mourning and funerary practices. The First World War ... was an important intervention... death became an occasion for censorship, and England fought a battle of many deaths but no bodies. For the first time, corpses were not shipped home for burial.<sup>47</sup>

Annika Houwen describes how the scale of carnage faced by soldiers in the trenches was unprecedented and difficult to communicate to those at home. But Houwen also reminds us that distance from battle and the lack of corpses returned from abroad did not mean that those on the home front were entirely shielded from the horrors of the war. Evidence of the damage caused by machine gun fire, artillery shells,

and poison gas was clearly present on the bodies of wounded survivors. Examining the spread of cremation, which outpaced burial by the late 1960s, and the treatment of the dead body in detective fiction, Houwen argues that there was a turn away from the corporeal and the physical horrors of the war toward the pastoral and the purification of the body as sacrifice. Echoing Freedman and David Cannadine, she argues that the war's impact on mourning has been underplayed and that the search for meaning and catharsis both built upon and altered the thrust of the secularized death that had already developed in the nineteenth century.<sup>48</sup>

In the August 1918 Guelph College Agricultural Bulletin, Jones wrote of bacteria as 'friends and foes', noting their ability to quickly multiply as their most significant property and subsequent ability to be helpful and injurious in human terms. The same could be said of human beings, our ideas and creations.<sup>49</sup> Much of the text dealt with 'friends' familiar to him in his work on soil bacteria, but toward the end of his article he referred to major infectious diseases, noting the importance of the high-powered microscope in rendering visible the minute organism responsible for epidemic infantile paralysis (Poliomyelitis, or more popularly, Polio).<sup>50</sup> For the bubonic plague, he emphasized the prevailing use of 'strict quarantine regulations at ports of entry and the common routes of transmission for the plague bacillus'.<sup>51</sup> Finally, he turned to influenza, noting the idea that like the plague it came from the East, and that 'occasionally a great epidemic will spread over the entire civilized world. The last great epidemic reached Russia from the East in the fall of 1889, and gradually spread over Europe and to America, causing much suffering and many deaths.'<sup>52</sup> In 1920 Jones recalled his presentation at the Montreal conference in 1913, betraying no sense of the 'many sufferings and deaths' he had recently witnessed.<sup>53</sup> In the interim, the microscopic foes of humankind had been carried back to Guelph. Along with several other newspapers in Canada, the local paper published photos of three young men standing on the prairie in Calgary masked like bandits as a precaution against the flu (Fig. 4).<sup>54</sup> By September 1918, less than a month after publication of Jones's *Agricultural Bulletin* article, soldiers from the war nearing its end had already carried the Spanish flu back to Ontario. Jones survived the onslaught of infection, described as worse than 'Hun-bullets' by the local *Guelph Mercury* newspaper. Living to see the day when Jonas Salk announced his new vaccine, Jones passed away before the trials had finished pronouncing it safe and effective.<sup>55,56</sup> Like



**Fig. 4** Prairie farmers. *Source* Library and Archives Canada/PA-025025

Sykes, he was of an age to be a prime target of the virus. They shared a love of literature and were skilled as amateur artists. But the country that mourned Sykes as a great man had offered little to the young Jones, who had left the Midlands for Canada, where he first became a laborer. The connected world gave him the opportunity to study and become a professor of biology. In contrast to Sykes' global outlook, Jones cast his eyes toward the microscopic world. His work and that of his colleagues would be succeeded by others in microbiology, virology, and epidemiology who would continue to make advances in soil fertility as well as in agricultural production, the development of vaccines, and other areas crucial to the incidence of pestilence and famine, if not the pursuit of war.

The still-contested Armenian genocide (1915–1917), lesser-known famine and genocide in Iran (1917–1919), and famine in Russia and the Ukraine after the war were all linked by way of the shifting geopolitics leading to the conflict, wartime occupation, and the exhaustion of

resources contributed to by the war effort. Different degrees of food crisis extended into eastern Europe. War had established an ‘indisputable turning point in the body’s politization’.<sup>57</sup> Unlike combatants from the war, children could be styled as completely innocent. In 1920, Eva Vajkaj, head of the Hungarian League of Child Protection, recalled a visit to the room of a poor family and her shock at being shown a malnourished child, which she described as a ‘sort of horrible little living corpse’.<sup>58</sup> In Russia, a year before her death, Lyubov Sergejevna Popova (1889–1924) noted the greater propaganda impact of using photographic images of hungry people versus sketches of their plight.<sup>59</sup> Extant images from Russia, especially from 1922 show that photographers chose to capture skeletal images of starving children more often than those of adults. By 1923 the specters of war, pestilence, and famine seemed to recede for a moment. But civil wars and colonial strife would continue, the conditions for recurrent famine remained, and there were still few weapons against infection and disease. Other epidemic diseases continued to take their toll. Popova’s husband art historian Boris von Eding succumbed to typhoid in 1919. She died on 25 May 1924 a few days after the death of their young son, both victims of scarlet fever. It would take another two years before Russian agricultural production regained the levels reached before 1913.

#### REFLECTIONS ON ARCHAEOLOGY, BIO-HISTORY, AND VISUALIZING BODIES

The renewal of the battlescape by nature and through commemorative practices turns us back toward the land and the lineage of places. Memorialization and identification seek to both unify the nation itself as a common body and distinguish the individual from the mass. The war resulted in mountains of bodies and a vast visual record and yet so much is still concealed or has never been viewed and critically assessed. Poring over the many photos of the war while searching for bodies, one must look twice at the images of sandbags, which are so reminiscent of corpses piled in trenches. In Belgium, near the French border, is Messines, a high ridge in the verdant farmland of West Flanders. Looking at the cattle ponds dotting the green fields today one would not know that they are immense bomb craters. The greatest of these was caused by a single detonation 7 June 1917 a phase in the third battle of Ypres, which created

a mass grave on a par with the sea of headstones at Étaples or the total number carried off by flu back in Ontario. The blast from the nineteen mines was said to have been audible in London. Today, Spanbroekmolen, once the site of a windmill, is known as the 'Pool of Peace'.<sup>60</sup>

The close succession of centenary commemorations has played a role in spurring recent World War I research as well as the growing historiography on influenza. Watershed events in studying the plague are instructive here. Genetics have already contributed to a grounding of 'evolutionary narratives *in geographical space*' and the possibility of a 'unified history of plague'.<sup>61</sup> There has been a similar coincidence and sometimes even synergy between advances in understanding the causes of Influenza and its emergent historiography.<sup>62</sup> Building up since the 1970s, interest in the history of the 1918 pandemic has been fueled by local historians with close access to obscure or forgotten sources from the era.<sup>63</sup> Equally important are members of their communities who carry family stories of the Spanish Flu or have memories of direct contact with survivors. David Key, for example, who is the archivist and historian at Hursely Park Hospital in Hampshire, England, mentions documents recording the attempts by medical staff to stem the transmission of the virus by hanging sheets between the beds and a surviving photograph of the arrangement.<sup>64</sup> A blog comment from the relative of a flu victim who was a professional photographer describes the daily pictures he took recording the progress of his illness.<sup>65</sup>

Social historians of medicine have focused on the war as an explanation for the pandemic's forgotten status. Along with the idea that the flu was overshadowed by the war, there are perspectives that point to previous outbreaks that were less virulent as playing a role in promoting its invisibility. Others point to a stoicism or the biopolitical social control resulting from war that softened or allowed for the suppression of its emotional impact.<sup>66</sup>

Epidemics, armed conflicts, and food deprivations are all crises linked by their impact on bodies and the challenges they pose to everyday rules and norms of embodiment. But these events occurred at a time when dramatic new methods were being used for picturing bodies and contagion. While our understandings of the body, history, and the photographic image combine the material with the constructed, we tend to place a reliance on their solidity beyond our political and cultural frames of reference. As Kate Steinmann observes, today the photograph

‘does not fix or ossify’; *pace* Roland Barthes, it ‘blocks memory, quickly becomes a counter-memory’.<sup>67</sup> Photography captures and frames the horrible and the mundane. An image can remind and re-inscribe trauma, but its power for disintegration can be matched by its capacity for counter-memory, assisting in re-integrating the self, as an aid in coping and surviving.

Keepsakes and painful memories that might once have been seen only by family can now be shared worldwide. Walter Atkinson of Burnley, Lancashire, was 22 years old when he was killed at Gallipoli on 25 April 1915. His name is on the Cape Helles Memorial, but his death has probably been remembered more often by way of an online image showing him in uniform wearing his side cap.<sup>68</sup> Two days after Burnley, aboard a ship near Skyros, Rupert Brooke died from to an infection caused by a mosquito bite. To the many internet images of Brooke’s solitary Aegean island gravesite, we can now add the online image of the headstone of his younger brother William killed in battle on 14 June 1915.

And then there are those who endured the war only to succumb to the flu. George Robert Mitchell, 19 years old, of Hull, died 4 November 1918. News reached Guelph that Gunner John McTague passed away on 14 November.<sup>69</sup> Clarence Bilbe, 21, who served in Egypt and survived the Western Front, died from flu on 15 November. McTague’s name would be inscribed on the Guelph Cenotaph, but not that of his comrade Gunner Gilbert (Gib) Walsh. Walsh was a 33-year-old tailor when he joined the Canadian Expeditionary Force in September 1914. Wounded in action at Passchendaele, Walsh had survived ‘the trenches, bombardments and machine gunfire, he died of the flu at a Canadian military hospital in France on Jan. 2, 1919’.<sup>70</sup>

The recent centenary of the war has also been accompanied by the discovery of preserved bodies to which new techniques for identifying both people and virus strains might be applied.<sup>71</sup> In 2004, the corpses of three soldiers hanging upside down from an ice wall were found. In 2008 at Fromelles, seventy kilometers north of the Somme battle site, a mass grave was found. The first two pits have yielded 102 sets of remains. In 2010, in the Marmolada mountain range in north-east Italy close to the border with Austria, the skeleton of a soldier was dug out from a glacier. The bodies of two Austro-Hungarian soldiers were discovered in 2012 in the shifting Presina glacier. Examination of the bodies from the White War and high front line in the Alps has allowed for the reconstruction of

a sort of micro-history of the soldier: height, age, and the presence of pathologies. Almost all of them have a herniated disk or other signs of stress to the spinal column, [usually] found today in individuals over 50. This means that they performed heavy work, probably as farmers. And so many of them had serious cavities and abscesses. They fought while suffering from pain that we would consider intolerable today.<sup>72</sup>

Like places and buildings, historical events and bodies are composed and decomposed in a variety of metaphorical and material ways. Actual bodies are not static representations. They are always in process. Even the lifeless corpse is in a process of transformation that grounds us in geologic time and in the cyclical biosphere of our planet. In the war, we see not only the shattering, dissolving of flesh and bones resulting from mass mobilization, but also the different mechanisms that allowed people to cope. For the war dead, their memory has been crafted to become part of the imaginary of the nation. By comparison, famine victims are less noticeable in public history. Commemorations recalling the diaspora of nineteenth-century Irish immigrants fleeing famine are the exception. Compared to war dead, flu victims have also tended to fade in memory, but there are notable exceptions, including four memorials in New Zealand: a Maori monument built at Te Koura Marae; a statue in Waikari of Dr. Charles Little for his work during the pandemic; an Obelisk at Featherstone Training Camp cemetery; and a recent 2016 memorial in Waikumete.

In 1991, Roy Porter called for an interdisciplinary cultural history of the body that deployed more empirical evidence while also expanding the narrow medical view of the body as purely biological. In a revised edition, a decade later, he was satisfied to see that many different researchers had answered his call.<sup>73</sup> More recently, Roger Cooter discussed the challenges that the cultural turn in body scholarship has posed for historians.

For me, the work of medical anthropologist Annemarie Mol is instructive in thinking through how we might move forward in our approach to biohistory, or the history of the body. In *The Body Multiple*, Mol conducted fieldwork on the practices involved in diagnosing and treating atherosclerosis in a Dutch university hospital. She found that a slightly different bodily state was being discovered, discussed, gauged, or observed depending on the varied perspectives of specialists and the patient and on the time and place, whether it was in the patient's room,

while being tested or during treatment, or when connected to a device.<sup>74</sup> For Mol, this multiplicity does not imply fragmentation; instead, the disease is made to cohere through a range of tactics including transporting forms and files, making images, holding case conferences, and conducting doctor–patient conversations. She notes that while different representations and experiences of the body remain in tension they nonetheless ‘hang together’ in the dynamic practice of searching for solutions and trying out interventions.<sup>75</sup> From this perspective, I would argue that too much time over-conceptualizing frameworks is time taken away from our best tactic, which is to be problem focused and attentive to bodies in their contexts as we engage each other from our different disciplinary specializations.

The work of John Mraz on disease and damaged bodies during the Mexican Revolution (1910–1920) encompasses the period examined here. His study includes graphic images of the dead disfigured by gunshot, nurses and bystanders responding to the afflicted, and the burning of diseased corpses. Looking for elements of working, compromised or missing infrastructure that accounted for effective crisis response and/or the ability of diseases to thrive, he examines the material production of an image. Who was being portrayed and from what point of view, who paid for the raw film, chemicals, equipment, and paper needed to create prints and the labor or livelihood of the photographer or photo processor? Mraz highlights the need to think in terms of photographic authorship and context and the role of capital in making images during the early twentieth century.<sup>76</sup>

I end with three photographs portraying the living and the dead. The first one is a photograph of Rupert Brooke’s burial site. The second, mentioned earlier, is an image taken at Étaples of Canadian nurses visiting the grave of a fellow nurse killed in an enemy bombing. The last photograph is the frequently published image of three masked men referred to in the discussion of Guelph (see Fig. 4). The photograph of Brooke’s grave includes no mourners. He was buried quickly; his unit’s landing at Gallipoli was planned for the next day. In the Étaples photograph there is little sense of place. The eye is drawn to the paths between the graves; the nurses are gathered awkwardly; they focus on the fresh overturned earth of their companion’s resting place. Instead of the fresh mounds of soil covering the nurse interred at Étaples, Brooke’s grave is piled up with pieces of marble collected from the surrounding olive grove. There are two crosses, a larger one at the head inscribed with an

inapposite reference to the myth of Christian crusade and his name, and a smaller cross at the foot from his platoon. The only living presence in the photo is the photographer and whoever else might have stood outside the frame at the gravesite. The nurses are seemingly unaware of camera or the desolate landscape around them. In contrast, the three men wearing surgical masks look directly into the lens and appear to dominate the treeless terrain. Standing casually, one holds his hands behind his back, while the other two have their hands in their pockets.

Images of corpses and burial could enable a kind of ideological body snatching such as Brooke being remembered as a Crusader for a God he didn't believe in. The death of an innocent nurse served in a similar way to sustain a larger narrative supporting the war effort, but it was still a death like Brooke's that was genuinely mourned by her friends. Like the walking corpses emblematic of famine during the period, the half-masked face is a recurrent image in the archives of the Spanish flu. The photo of three men can be constructed as simple reportage capturing the practical response to pandemic and the invention in real time of Canada's public health structure. Like the 'corpselessness'<sup>77</sup> resulting from bodies being totally obliterated or buried abroad, like Rupert Brooke and his brother, the memory of the Spanish flu has been formed primarily around images portraying not death but protection or preparedness. The lack of photographs showing corpses and the frequently disfiguring cyanosis that led to death may simply be the result of conscious and unconscious choices made by photographers to frame efforts to survive and cope rather than dwell on the staggering number of dead.

In total, the three photographs offer a variety of details and clues relating to myth, ritual, gender, the ways of life and death, and the lines dividing the two. The image of nurses at the grave can be read in different ways, as calm and steadfast in the face of war or more traditionally as denoting feminine caring and connection. Although the three young men may have just been handed the masks by the photographer, a gendered reading might delineate the stance of the heroic male in purposeful resistance to the threat of infection. In each of these last images, we see evidence of life embodied within us and in the activities connecting us to each other. Images bearing traces of Rupert Brooke, the nurses, and three young men bring into sharp relief the ways we are prey to infection and injury, and the fact that we all decompose and do not last. In this final sense, the indeterminacy of the body and its many dimensions calls attention to that part of life outside our bodies, to language, culture

and living itself. For our finite nature is also accompanied by an ability to compose worlds, to rekindle lives in the reading of an image, to re-imagine the past, and most importantly to imagine each other and share our unique experiences in the present.

## NOTES

1. John Keegan, *A History of Warfare* 12:48 (1993); for a critique of Keegan see Patrick Porter, 'Good Anthropology, Bad History: The Cultural Turn in Studying War'. *Parameters* 37:2 (2007): 45–58.
2. A review of *History of Private Life* notes the overall successful description of bodies in cultural contexts is accompanied by a failure to integrate clinical or biological approaches to the body. If the intention was one of producing a 'biologico-social history of the body' the editors missed the mark as 'actual bodies are generally crowded out by represented bodies'. Colin Jones, 'A Hexagonal History of the Body'. *Past & Present* 204, (August 2009): 235–245.
3. Deaths in the Congolese free state from disease, political conflict between 1886–1908, 8–10 million; the Mexican Revolution 1910–1920, 1–2 million.
4. R. L. Atenstaedt, 'The Medical Response to Trench Nephritis in World War One'. *Kidney International* 70: 4 (2006): 635–640; R. L. Atenstaedt, 'The Response to the Trench Diseases in World War I: A Triumph of Public Health Science'. *Public Health* 121:8 (2007): 634–639.
5. W. T. Sedgwick, 'The Genesis of a New Science—Bacteriology'. *Journal of Bacteriology* 1:1 (1916): 1–4, p. 1.
6. When rinderpest spread when humans transported cattle, such as when conquerors moved herds to support their armies in the early centuries or through trade routes during colonization waves. For example, in 1889, when rinderpest entered Ethiopia, it contributed to famines that killed 1/3 of the country's human population, even though the microbe does not infect people. All sorts of diseases have emerged and re-emerged throughout history, often accompanying exoduses, military campaigns, and wars.
7. W. Asfaw, W. Dagnachew, N. Tewelde, and G. Endegnanew, 'Ethiopia Freed from Rinderpest'. Ministry of Agriculture and Rural Development (2009); J. Omiti and P. Irungu, 'African Union Inter-African Bureau for Animal Resources Socio-Economic Benefits of Rinderpest Eradication'. *Ethiopia and Kenya Consultancy Report* 6 (March 2010).
8. A celebrated murder case and international manhunt that culminated in the capture and possible wrongful execution of American homeopathic doctor Hawley Crippen for the London death of his wife Cora enabled by the use of new wireless communication technology, the mass media, photography, and forensic science. See David R. Foran, Beth E. Wills,

- Brianne M. Kiley, Carrie B. Jackson, and John H. Trestrail III, 'The Conviction of Dr. Crippen: New Forensic Findings in a Century-Old Murder'. *Journal of Forensic Sciences* 56:1 (2011): 233–240.
9. Glenn Reynolds, *Colonial Cinema in Africa Origins, Images, Audiences* (Jefferson NC: McFarland, 2015), p. 72.
  10. 'McGill Medical Society Hears Dr. Todd', *The Montreal Star* 29 November 1909. Todd spoke at a meeting of the McGill Medical Society regarding his research in the Congo; lecture supplemented by one hundred lantern slides. *McGill University Scrapbook*, vol. 2, p. 292.
  11. Barnett Cohen, *Chronicles of the Society of American Bacteriologists, 1899–1950* (Baltimore, 1950).
  12. Dan H. Jones, 'Further Studies with some Azotobacter'. *Nach Zentralblatt f. Bakteriologie* II:42 (1914): 68–69.
  13. D. H. Jones, 'Further Studies on the Growth Cycle of Azotobacter'. *Journal of Bacteriology* 5:4 (1920): 325–341, p. 325.
  14. Andrew W. Artenstein, 'The Discovery of Viruses: Advancing Science and Medicine by Challenging Dogma'. *International Journal of Infectious Diseases* 16:7 (2012): e470–e473.
  15. Marie Curie obtained vehicles that could be converted into mobile X-ray units and worked with electrical manufacturers to obtain portable electric generators.
  16. Alan Trachtenberg, 'Picturing History in the Morgue' in *The Tumultuous Fifties: A View from the New York Times Photo Archives* (New Haven: Yale University Press, 2001).
  17. Both Siegfried Kracauer and Walter Benjamin urged viewers to remember that photos are 'cognitions, constructions rather than passive reflections, opaque rather than transparent'. *Ibid.*
  18. Craig Allen, 'Photographers on the Front Lines in the Great War'. *New York Times* 30 June 2014. [https://lens.blogs.nytimes.com/2014/06/30/photos-world-war-i-images-museums-battle-great-war/?\\_r=0](https://lens.blogs.nytimes.com/2014/06/30/photos-world-war-i-images-museums-battle-great-war/?_r=0). Hilary Roberts is photography curator at the Imperial War Museum in London and a co-author of *The Great War: A Photographic Narrative* (London: Jonathan Cape, 2013).
  19. Heide Fehrenbach and Davide Rodogno. *Humanitarian Photography: A History* (Cambridge: Cambridge University Press, 2015).
  20. Stanley G. Payne, David J. Sorkin, and John S. Tortorice, *What History Tells: George L. Mosse and the Culture of Modern Europe* (Madison: University of Wisconsin Press, 2004).
  21. *Ibid.*
  22. Allen, 'Photographers'.
  23. For more on women's status in the war see D. J. Poynter, "'The Report on Her Transfer was Shell Shock": A Study of the Psychological

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  25. Ulrich Hägele and Walter Kleinfeldt, *Walter Kleinfeldt Fotos von der Front 1915–1918* (2Münster: Waxmann 2014).
  26. Returning home in 1918, he set up a photography shop in the town of Tübingen, where he worked until his death in 1945. His son Volkmar discovered the pictures three years ago. *Hidden Histories: WWI’s Forgotten Photographs*, BBC4 <http://www.bbc.co.uk/programmes/b03xsrvv>.
  27. Barbara W. Tuchman, *The Guns of August* (New York: The Macmillan Company, 1962).
  28. Over time the initial images used to market Tuchman’s book shifted away from photos of the three emperors to depictions of weaponry and soldiers, which were more in line with her thesis.
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  31. Jennifer Tucker. *Nature Exposed: Photography as Eyewitness in Victorian Science* (Baltimore: Johns Hopkins University Press, 2005).
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33. Peter C. Wever and Leo Van Bergen, 'Death from 1918 Pandemic Influenza during the First World War: A Perspective from Personal and Anecdotal Evidence'. *Influenza and Other Respiratory Viruses* 8:5 (2014): 538–546; James E. Hollenbeck, 'An Avian Connection as a Catalyst to the 1918–1919 Influenza Pandemic'. *International Journal of Medical Sciences* 87 (2005); Anton Erkoreka, 'Origins of the Spanish Influenza Pandemic (1918–1920) and its Relation to the First World War'. *Journal of Molecular and Genetic Medicine* 3:2 (December 2009): 190–194.
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  51. *Ibid.*, p. 50.
  52. *Ibid.*, p. 53.
  53. *Ibid.* and Jones, ‘Further Studies’.
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  57. Kathleen Canning, ‘Feminist History after the Linguistic Turn: Historicizing Discourse and Experience’. *Signs* 19 (1994): 368–404, p. 394 in Friederike Kind-Kovács, ‘The Great War, the Child’s Body and the American Red Cross’. *European Review of History/Revue européenne d’histoire* 23:1–2 (2016): 33–62, doi:<http://dx.doi.org/10.1080/13507486.2015.1121971>, p. 37.
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# Shrouded Corpses, Walking Cadavers: The Shifting of ‘the Choleras’ in Depictions of Southeastern Captivity

*Lizzie Oliver*

On 14 June 1943 Edward ‘Weary’ Dunlop, a surgeon and colonel in the Australian Army, wrote in his diary that his Japanese captors were in a ‘flat-tailed spin’. ‘Some’, he added, ‘are actually walking about the camp in masks’.<sup>1</sup> The dreaded cholera had arrived. At the time, Dunlop was a prisoner of war (PoW) in Thailand. He was one of forty-four Australian medical officers (alongside British and Dutch medics) tasked with caring for the thousands of men who were forced by the Imperial Japanese Army to construct a 400-kilometre railway between Thailand and Burma during World War II.<sup>2</sup> Dunlop himself was in command of 1,000 troops who were shipped from Java to the thick of the jungle in January 1943, joining men who had been laboring on the railway since September 1942. The line was eventually completed in October 1943, and the labor force for what was to become known as ‘the Death Railway’ included at least 180,000 civilian labourers and 64,000 Allied PoWs (for map of camps, see Fig. 1).

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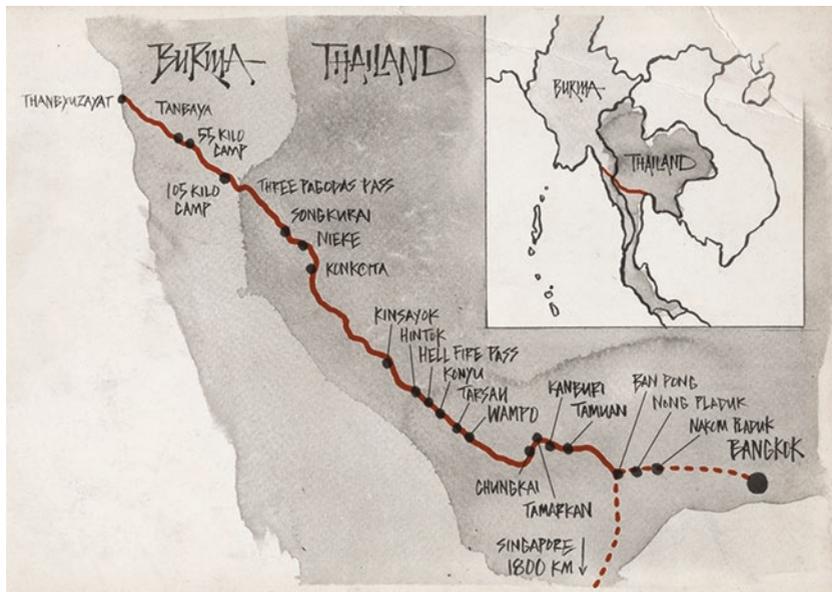


Fig. 1 Camp map, Thailand–Burma Railway. Bret Syfert 2015

The conditions in which PoWs were held were very poor. The culture of the Japanese military at the time was one that shunned the position of the prisoner: to surrender to the enemy was considered a dishonorable act. As a result, Japanese forces ‘came to regard time, effort and money spent on the large number of enemy PoWs as a one-way burden’.<sup>3</sup> Allied prisoners were, in the eyes of their captors, unworthy of the basic tenets of PoW care that had been set out in the Geneva Convention. This perception manifested itself throughout the PoW camps across Southeast Asia in a chronic lack of medical provision or adequate rations, and a system of brutal forced labor and corporal punishment. For the PoWs, this meant that any provision of medical expertise and basic personal care that could be developed and managed among themselves was an increasingly fundamental aspect of survival.

As a medical officer, Edward Dunlop was a key figure in ensuring that effective regimens for this care were devised and administered within the camps as efficiently as possible. Recording what this meant in practical terms, Dunlop maintained a daily diary throughout his captivity.<sup>4</sup>

It is a remarkable, detailed, and intimate portrayal of the sufferings of men who experienced unrelentingly harsh circumstances. In this diary Dunlop recorded the work that medics undertook with meagre resources to try to help the PoWs in their care. Tropical diseases apart from cholera were ubiquitous in the camps. Diseases such as dysentery, malaria, typhoid, and tropical ulcers were rife in captivity, and not just on the Thai–Burma railway. These diseases were prevalent across all regions of Southeast Asia where military prisoners were held, and they were treated many times daily by the medics in captivity. Most PoWs would experience several attacks of diseases such as malaria and dysentery during each year of their imprisonment and many would continue to suffer their effects post-liberation and repatriation. Cholera, however, did not feature in the day-to-day experience of all PoWs. Indeed, cholera was a dreaded part of the experience of a select group of men.

Cholera was not, for example, ever reported on the Sumatra railway, a project similar to the Thai–Burma railway, constructed in jungle conditions, and carried out by prisoners and civilian laborers in the Dutch East Indies.<sup>5</sup> Dysentery, malaria, and ulcers were all regularly contracted, but cholera was not present here. It was a disease localized, with epidemics hitting particularly during the monsoon seasons in the remote jungle camps of Thailand. Yet, although cholera was not part of the typical experience of many prisoners of war in Southeast Asia, depictions of the disease are prominent in post-war representations of captivity, by which I mean the art produced, the memoirs written, and exhibitions curated.<sup>6</sup> The influence and memory of cholera, despite its presence in some of the remotest camps, has continued to linger.

This chapter examines the figure of ‘the choleras’ in representations of Southeast Asian captivity through diary, photography, and fiction. In doing so, it shows that contagion performed two functions in enabling the histories of captivity to be told and understood: firstly, the disease was divisive, segregating patients from their campmates and removing vital support networks during captivity; yet the experience of disease was cohesive, too, creating communities of care among medics and their men. In the post-war period, I argue that these two roles for the representation of disease have created a bridge for the transgenerational transmission of historical accounts. The case study of Richard Flanagan’s novel *The Narrow Road to the Deep North* illustrates how second-generation writers have found that as disease is communicable, it enables stories to become so, too.

## THE DIVISIVENESS OF DISEASE

Cholera is a bacterial infection that causes severe diarrhoea and is quickly fatal in many of those affected. For the PoW in Thailand, once it was contracted, there was little hope in survival. In the words of Henry Traill, a PoW at Konyu camp on the Thai–Burma railway,

In our minds we thought of cholera in the same terms as the Plague or the Black Death of medieval times, pestilences which had no cure and which decimated whole populations. These diseases bring with them a feeling of inescapable doom, and now that this epidemic of cholera was coming upon us how could any one of us hope to be singled out among thousands to survive it? I for one, when I heard of the outbreak, felt in my heart, and understood for the first time, ‘the icy clutch of death’.<sup>7</sup>

That ‘icy clutch’ gripped so hard that a cholera patient in the Southeast Asian camps could be diagnosed in the morning and be dead by evening on the same day. For example, nine months after the first rumors of disease were reported in his diary, on the evening of 19 June 1943, Dunlop diagnosed his first case of cholera. That diagnosis was recorded at 20.30 hours during sick parade followed by ‘at once isolation’; just five hours later, at 01.25 on 20 June 1943, the sick man (noted by Dunlop as a Private Harris) died.<sup>8</sup> It was the beginning of what Dunlop would describe just one month later as ‘the grimmest fight I have ever been in’.<sup>9</sup>

Cholera is passed directly between humans where contact is made with infected bodily fluids, or, and this was a huge problem in the Southeast Asian camps, it can also be transmitted indirectly by ingestion of infected food or water. Although humans are the only animal carriers of the infection, it can survive for several months in water: the camps along the Thai–Burma railway in which cholera caused the most devastation were situated next to a river. In a small attempt to combat the disease, some cholera vaccinations were administered. Inoculations began at Hintok on 29 May 1943, but this was a slow and late response when cholera was already claiming hundreds of lives. The disease becomes endemic where there are poor standards of personal and environmental sanitation and hygiene; again, this was a major issue in the camps along the railway. Once the disease broke out among populations of forced civilian laborers (known as *romusha*), it would inevitably spread to military camps.

Having been taken from local villages, or shipped across from Java, the romusha workforce on the railway (made up of forced civilian slave laborers) did not have the benefit of organizational and social structures set up in camp as per the military PoWs. Nor did they receive any official rations or medical treatment—their plight was desperate, and at the outbreak of disease they had no resources with which to control its spread. Dead bodies would rot openly in the jungle and the sick would continue to use the river: thus, in the jungle camps of Thailand, cholera spread rapidly and without discrimination.<sup>10</sup> On 13 June 1943, writing from his camp in Hintok (a mountain camp in Thailand), Dunlop recorded that two hundred and forty civilian laborers were reported dead from cholera in two days; the following day a further two hundred cases were reported at Konyu camp nearby.<sup>11</sup> The latter cases were of grave concern: the camp at Konyu was situated on a river, vastly increasing the chance of cholera spreading quickly to neighboring camps. Four months previously, while Dunlop was at Konyu, Japanese Officers had ordered military prisoners to stop swimming or cleaning their teeth in the rivers following a cholera outbreak upstream. However, they had continued to ‘bathe and wash our clothes’.<sup>12</sup> At that point, for Dunlop, an outbreak of such a virulent disease among the PoWs would have been ‘the last touch’. This was particularly the case at a time when men in the camps were already suffering from the likes of dysentery, malaria, malnutrition, and the ravages of hard labor on a starvation diet.

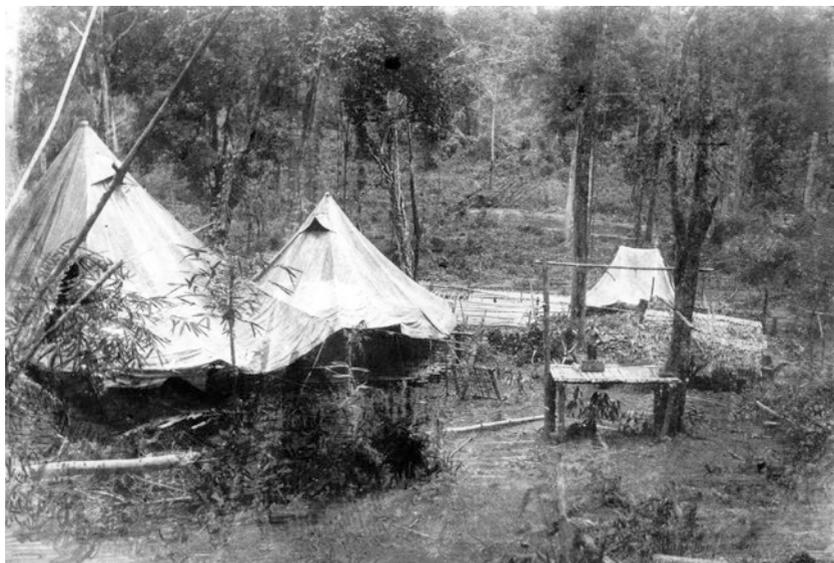
With such weakened men to care for, the mere thought of cholera created genuine fear for the medic. Even in a situation where the frequency of other tropical diseases was much higher, Dunlop’s diary reveals the prominence of cholera in the mental preoccupations of doctors. Indeed, close interrogation of the published version of his diaries is illuminating. The word ‘cholera’ appears 197 times. This compares with 166 references to ‘dysentery’, 147 references to ‘malaria’, 109 to ‘ulcers’, 55 to ‘skin’ (infections, grafts, and its appearance in patients), and 29 to ‘avitaminosis’.<sup>13</sup> All these conditions were much more common among the PoW population throughout the entirety of captivity than cholera. Yet it was the contagiousness, treatment, and eradication of cholera that occupied Dunlop’s writings most frequently. Certainly, it is clear that the mere threat of cholera was enough for Dunlop to use precious reserves of paper in recording it: he references the disease twenty-two times in his diary during the nine months before he began to witness and treat the disease for himself. The symptoms of the disease were fierce.

The first sign of cholera was a sudden onset of diarrhoea, or a change in the type of diarrhoea, which became slightly more frequent, watery, colourless, and copious. The evacuations were separated by intervals of an hour or more and were often followed by a sense of relief. According to the severity of the attack, vomiting would follow a few hours later ... Pints of fluid gushed out from a patient's mouth without any straining or apparent distress.<sup>14</sup>

Other symptoms included deafness, poor vision, stiff limbs, wrinkled skin on the fingers, and 'sunken darkly ringed eyes'. The first course of action in the PoW camps upon diagnosis of cholera was immediate isolation of the patient, and—crucially—those caring for him. To try to contain the disease, a remote part of the camp became an 'isolation area' for cholera patients. This would include a 'hospital' for the treatment of cholera specifically. These tents were kept as enclosed as possible so as to reduce the number of flies getting near the patients and bodies of the dead. Images of these conditions are rare. Although cameras were forbidden in the camps, astonishingly, one PoW—George Aspinall—did manage to smuggle with him a camera (a folding Six-20 Kodak Brownie), some film, and developing fluid. At great personal risk, he carried this camera and its associated equipment from Changi camp in Singapore onto the Thai–Burma railway. However, Aspinall took an even greater risk than keeping the camera and taking the pictures—he developed his photographs in captivity also. He understood that unless he developed the photographs while he was still in the jungle, the film would likely be destroyed by the humid tropical conditions. Thus, Aspinall would creep around the camps at night to develop his pictures, and then secrete them away in the hopes of one day presenting them as evidence of what he and his campmates had endured.<sup>15</sup>

One of the last pictures that Aspinall took was of the cholera tents at Shimo Sonkurai in Thailand in 1943 (Fig. 2).

The cholera patients were isolated in the tents on the left of the picture. The table on the right at the front of the trees was used by surgeons to undertake treatments such as ulcer cleaning and operations including amputation. The tent at the back, on the right behind the trees, was the mortuary where the bodies of cholera's victims would be stored until cremation could take place. The staging of Aspinall's photograph is echoed in a painting by PoW artist Jack Chalker of the cholera huts that were built in Hintok, where Dunlop worked. In Chalker's painting—as



**Fig. 2** The cholera tents at Shimo Sonkurai. George Aspinall, 1943. Courtesy of Australian War Memorial: P02569.189

in Aspinall's photograph—the huts are separated from the rest of the camp. They are depicted by Chalker in the distance among trees and jungle grasses. Once again, the huts are constructed out of wood, bamboo, and leaves (material known as *atap*), with the same draped roof of the rudimentary tents that Aspinall shot with this camera.<sup>16</sup> Former medical officer Hugh de Wardener would recall of the cholera tents: 'There were no groundsheets, the patients lay on wet earth'.<sup>17</sup>

The contagion created such misery that all medical officers having to treat the disease retained vividly visceral memories of the experience following their liberation from captivity. Harry Silman, a British medical officer on the railway, was stationed in the camp at Sonkurai when Aspinall took his photograph. Like Dunlop, Silman also maintained a daily diary of his experiences. On 3 June 1943 he visited the 'cholera centre'.

It looks like a scene from a film, completely unreal. There is a long, dark, atap [*sic*] hut, with over a hundred thin skeleton-like beings, writhing on the long platform, vomiting and passing motions where they lie. Groans

and cries are the only noises to break the silence. Two or three orderlies with masks over their mouths were giving intravenous injections of saline, using Heath Robinson contraptions. About nine corpses lay outside covered with blankets and groundsheets, and a little distance away, the smoke of the pyre where the corpses are burning could be seen ... One feels so helpless. With these cases there are no antitoxins, just rest, and the men are choking to a slow and painful death.<sup>18</sup>

With such helplessness came fear, and the horror of the disease spread as rapidly through the camps as the disease itself. Chalker the artist spoke of cholera in his later years, describing it as ‘the most frightening thing I have ever seen. I was far more frightened of that than the Japanese’. Within twenty-four hours of his campmates contracting cholera, he remembered ‘friends [who] were so shrunken and so different, this was a frightening thing to see ... we carried them out [of the tents] one by one, absolutely petrified’.<sup>19</sup> For Chalker, to draw them and their plight was a way to record the experience, and it became a means to communicate it in the post-war years.

Such pictures thus go some way to portray to post-war audiences how isolation was not merely a physical necessity to control the spread of cholera, but simultaneously rendered a severe psychological blow. For example, Aspinall’s stark black-and-white image of shrouded tents in remote jungle show us how individually isolating the experience of cholera was. The cholera tents were placed outside of the main billeting areas, thereby reducing the risk of the disease spreading throughout the entire camp. But in taking such necessary steps, the medics were also forced to remove patients from comrades and companionship who had been, to that point, crucial to their long-term survival.

Companionship in the Southeast Asian PoW camp came in the form of one of the most simple but fundamental features of captivity: the *kongsi*. Translated from the Malay as ‘share’, the *kongsi* was a group of two or three PoWs who shared everything with each other: extra morsels of food, additional provisions bartered or stolen, and basic care when each other were sick and exhausted. These relationships were some of the most important aspects of maintaining morale as well as physical survival: they provided comfort, care, and companionship—‘it was more like a family group’.<sup>20</sup> Therefore to be isolated as a result of cholera or another contagion was to be removed from an intimate support network, a ‘family group’ that sustained a man emotionally as much as physically. Not

only in death but in the control of contagion and the battle for survival, vital friendships were literally carried away from each other ‘one by one’.

In such dire circumstances, maintaining hope was vital. Ironically, that hope also came in the form of other diseased bodies. In 1943, PoW artist Ray Parkin sketched ‘Two Malarias and a Cholera’, an image as striking for its title as for the picture of the three sickly figures that Parkin had drawn (Fig. 3).

As the title evokes, these three men are no longer individuals supporting one another, but their diseases—‘two malarias and a cholera’. They have their backs turned as two skeletal figures (‘the malarias’) hold up a third (‘the cholera’) between them as he threatens to collapse.<sup>21</sup> The drawing depicts a specific event that occurred on the Thai–Burma railway, when a man had fallen sick with the symptoms of cholera while away from the camp working on the railway line. The Japanese guard in charge had refused to let the man be taken back to the camp for treatment. Eventually, he was permitted to be taken back by other sick men: the two suffering with malaria. In Parkin’s image, known only by their diseases, these are three men defined by the illnesses that they were suffering: the experience of captivity defined and represented by the limits to which contagion pushed each body. Cholera, in Southeast Asia, was the ‘limit’ disease: it was the most deadly, the most inhumane of them all. It meant isolation and almost certain death. The men contracting the disease were no longer individuals but their diseases: two malarias and a cholera.

Encapsulating the deindividualization of disease, and yet the community spirit that also grew out of contagion, Parkin’s picture is an image that has become synonymous with post-war histories of Southeast Asian captivity. For younger generations, it communicates both the history of contagious disease experienced during the World War II and the remembrance of a traumatic captivity. In its depiction of support and strength through struggle it has become the logo for the Changi Museum in Singapore.<sup>22</sup> Furthermore, in an act that places the individual back at the center of the experience, the Thailand–Burma Railway Centre commissioned a statue in which Parkin’s drawing is imagined in reverse. For post-war generations, the three men face forward, their faces clearly visible to an audience: their story is told as a community divided by disease, but brought together through its care.<sup>23</sup>



**Fig. 3** Two malarias and a Cholera, 1943. © Parkin Estate. Courtesy of the Parkin family and Pattie Wright

## A COMMUNITY OF CARE

Despite the bleak reality of isolation, the treatment of contagion also created new forms of community in the Southeast Asian camps: communities of care. These did not just comprise the *kongsi*, but a social initiative inspired and led by medical officers to address the daily health and hygiene problems that were encountered during PoW camp life.

Thus medical officers undertook and oversaw a wide variety of functions within the hundreds of camps across Southeast Asia. They provided whatever treatment they could for the tropical diseases, malnutrition, wounds, and injuries that were ubiquitous among PoWs. In addition (and essential to the efficacy of their primary care work) medics also established and managed hygiene and sanitation protocols across camps and configured the most nutritious rations that the cooks would be able to create out of meagre portions of rice, tapioca, vegetables, and scant meat. Some were also keen to ensure that PoWs undertook intellectual or creative pursuits to help to maintain their morale and wellbeing.<sup>24</sup>

In the daily running of the camps, the treatment and containment of disease was paramount. Many trained medical personnel had no experience of the illnesses that they were required to manage—malaria, dysentery, tropical ulcers, and beriberi were rife, and in some camps alongside cholera there was also dengue fever, typhus, and a wide variety of skin infections and parasitic infestations with which to contend. Furthermore, as Aspinall's photograph evidenced, medics were forced to provide treatment in the most unsanitary of environments, with very few medicines and only rudimentary materials available to them.<sup>25</sup> Due to this lack of basic provisions, doctors became exceedingly resourceful and creative, and called upon specialists from other disciplines and trades to assist in the development of camp-based healthcare regimes. By recognizing the valuable contribution that the various skills and knowledge of PoWs could make to help the medical personnel—such as those of 'a geneticist and a pharmacist and a tinsmith'—Jack Chalker recalled that 'a corporate effort of survival' was encouraged within the prison camps.<sup>26</sup> It was not only scientists and tinsmiths, but engineers, rubber planters, and carpenters who were involved in the development of tools and equipment; artists, both amateur and professional, recorded sketches of ailments and their treatment, and many volunteers undertook basic nursing training under the supervision of medical officers in order to provide care for the sick and the dying. This meant that the effective performance of medical

diagnosis, treatment, and aftercare became dependent on the scientific knowledge, creative imagination, and practical craftsmanship of hundreds of men.<sup>27</sup> In Nakom Paton camp in Thailand (a dedicated hospital camp set up in mid-1944), for example, Dunlop oversaw a group of men who acted as the 'physiotherapy department', and this included carpenters who were enlisted to design and build makeshift pedaling and rowing machines, walking apparatus, and other exercise equipment from scraps of wood, metal, and other materials recycled from around the camp. These were then given to the 'physiotherapists' (volunteer masseurs) to use with patients. All the while this team worked in partnership with an 'orthopedic department', headed by an engineer, that designed and made prostheses, splints, and supports, as well as equipment such as suction pumps that assisted in 'the operating theatre'. With the various professions and trades collaborating towards positive outcomes for sick and injured campmates, their work can be viewed as the early development of interdisciplinary, if unorthodox, care teams.<sup>28</sup>

In the effort against cholera, these care teams were essential. The only available treatment in the jungle camps was the rehydration of patients, but the provision of plentiful sterile water and its speedy administration was a challenge when there was no proper equipment to hand. For one desperate patient, Dunlop improvised 'intraperitoneal administration' (injection into the body cavity in the abdomen). This was done using a record-player needle, a rubber catheter, a syringe 'then followed up with kitchen salt and ordinary boiled water', a treatment that offered 'considerable improvement' within hours.<sup>29</sup> A saline still was therefore fashioned from a petrol feed pipe from a lorry 'passed through a large bamboo water jacket and the actual boiling vessel of 4 gallon petrol tin, leading to the petrol pipe by bamboo joints'.<sup>30</sup> Once working, the still at Hintok began to produce one and a half pints of saline per hour, saving 'many lives'.<sup>31</sup> This community of care and 'corporate effort of survival' was therefore extraordinarily effective given the privations suffered in PoW camps across Southeast Asia.

However, the work of the community in the face of contagion was not dependent solely on the expertise of individuals with specialist skills, such as engineers and carpenters. It was in fact fundamental to abate the spread of the contagion by gaining the understanding and cooperation of all members of the camp. Thus, in a direct attempt to reduce the incidence of cholera, the following six general measures had been put into place by Dunlop at Hintok on 14 June 1943:<sup>32</sup>

1. All water was to be boiled and food was to be cooked in camp; this meant men were not to eat fresh fruit, nor ready-made food obtained from local populations.
2. All utensils were to be boiled in water to clean them, using containers supplied for this specific purpose.
3. Food items and refuse were all to be covered by large mosquito nets that had been supplied by Japanese guards for this reason.
4. Castellani's bottles were supplied in the kitchens and other work areas for the frequent washing of hands.
5. The Japanese agreed that they would no longer wash at the location of the camp's main water supply.
6. A campaign was put into place to treat the latrines with kerosene and oil (latrines tended to consist of open trenches dug into the camp ground and were generally infested continually with millions of maggots); supplies of kerosene and oil were also provided to stem the spread of malaria through the killing of flies. In relation to the latter, men were ordered by the Japanese to catch flies in the camps, in return for payment or food rations.

These camp-wide health campaigns not only supported the work of the medics. They also created a sense of community among PoWs: in the stemming of disease, there was a common goal to which men could work together. In an effort to gain support for the work, the commands to sterilize utensils and containers and to protect food and other surfaces from flies were transformed into cartoons and posters created by PoW artists to warn others in an entertaining and engaging way of the serious dangers of unhygienic practices.<sup>33</sup> The compliance of all inhabiting the camps was essential. In an oral history interview with the Imperial War Museum, former PoW Francis Binstead recalled the steps that were taken by Dunlop to quell the increase of cholera. This included the need for camp populations to work together as a community in efforts to combat the disease. The best way that they could care for each other, he said, was to ensure the men listened to the medic: 'the only way we can help each other is to do what I am telling you'.<sup>34</sup> Following the implementation of the measures listed above, Dunlop identified an immediate improvement in camp hygiene. Nonetheless, he wrote on 15 June 1943 that the PoW camps in Thailand were rapidly becoming 'camps of disease, misery and death'.<sup>35</sup>

The artwork created to engage with camp inhabitants on hygiene protocols also transpired to be a means for artists to assist medical staff in recording the conditions they were enduring. Sketches and drawings

created by PoW artists helped directly in creating and maintaining pictorial evidence of diseases and injuries suffered, their symptoms and pathology, and the basic treatments administered in camp.<sup>36</sup> For example, Edward Dunlop—recognizing the epistemological significance of the medical work being carried out while on the Thai–Burma railway—recruited Chalker to record detailed studies of the diseases encountered, and the medical innovations that he was implementing. These studies would later be published alongside Dunlop’s accounts of treating tropical ulcers, diseases such as dysentery and cholera, and the effects of avitaminosis, including the symptoms of pellagra, scrotal dermatitis, and peripheral neuropathy, or ‘burning feet’.<sup>37</sup> The medic in camp, working in such difficult circumstances but already with a view to publishing his notes post-war, was acutely aware of the significance of these personal narratives of disease to the individual as well as to medical knowledge. Thus, post-war journal articles were often illustrated by the anatomical studies, portraits, and sketches produced by artists in the camps. As a form of what Meg Parkes and Geoff Gill term ‘documentary art’, the pictures became a vital evidential record of the symptoms of tropical disease, the conditions in which those diseases were being suffered, and the rudimentary nature of the facilities in which medics could carry out their care.<sup>38</sup> Therefore what began as the medical reporting of contagion and its treatment offered a chance for former PoWs to communicate the experience of captivity in the years following liberation. For an artist such as Ray Parkin the creation of the images in camp meant that ‘the experience will not be entirely wasted. Memory is not good enough’—there needed to be a pictorial record, too.<sup>39</sup> But the camp art that survived also provided younger generations with an important glimpse into the personal experience of captivity. The fact that many of these pictures had been commissioned for medical purposes also explains to some extent how the historiography and cultural representation of captivity became dominated post-war by the body in the grip of disease. Indeed, with these images to draw upon, the figure of the medic fighting contagion has enabled a post-war narrative of heroism and survival to be constructed by museum curators, film-makers, and writers alike. Thus, to explore the post-war depiction of contagion, I end this chapter with the figure of the medic working to treat cholera, as depicted in Richard Flanagan’s second-generation novel of the Thai–Burma railway, *The Narrow Road to the Deep North*.

## THE SECOND-GENERATION FIGURE OF THE MEDIC

'It was as if they were willing him into being', writes Flanagan towards the beginning of *The Narrow Road to the Deep North*—it was 'as though there had to be a Big Fella'.<sup>40</sup> The 'Big Fella' that Flanagan writes about is Colonel Alwyn Dorrigo Evans, referred to by nearly all characters in the novel—including Evans himself—as Dorrigo or Dorry. Evans is a medical officer in the Australian army, taken PoW by Japanese during World War II. He is incarcerated initially on the island of Java, transported to Singapore, and from here is taken with the troops in his command to Thailand, where he joins the construction of the Thai–Burma railway. It is the experience of forced labor along the railway, and its post-war legacy, that is at the heart of Flanagan's novel. Furthermore, Dorrigo Evans is based in large part on Edward Dunlop, who remained a firm advocate for veterans' welfare in Australia in the decades following liberation. Calling Dorrigo Evans the 'Big Fella' is one of many allusions that Flanagan makes to Dunlop's biographical history throughout the course of his novel. Owing to Dunlop's physical stature and strength, he had been christened 'the big fella' by his batman, close friend, and fellow PoW Milton 'Blue' Butterworth.<sup>41</sup>

But Dunlop's iconic post-war status was not the only reason for Flanagan's choice to draw heavily from his biography in the development of his novel: there was a deeply personal connection between the Flanagans and the Dunlops too. Flanagan's father, Arch, was a member of the troop of PoWs who were commanded by Dunlop along the Thai–Burma railway. On his return to Australia after the war, Arch Flanagan made a wooden plaque to commemorate his own PoW experiences in Southeast Asia, and his friends who had died during captivity. Incorporated into this plaque was a picture of his commander, Dunlop.<sup>42</sup> Thus, Richard Flanagan grew up with a picture of Dunlop hanging on the wall of his family home, rendering the history of his father's camp experience—and Dunlop's part in it—especially visible during his childhood.<sup>43</sup>

Despite the familial narrative that had clearly inspired *Narrow Road to the Deep North*, Flanagan stated that he did not want his novel to be 'about' his father: 'I did not want some fictionalised version of his life. As much as it was about my father and me, it had to escape us both.'<sup>44</sup> That 'escape' came in the form of a 'fictionalised version' of another life and the medic that Flanagan created to convey it. Comparative analysis of Dunlop's wartime diaries and Flanagan's novel shows that it is not just

fellow PoWs that ‘will’ the ‘Big Fella’ of Dorrigo Evans into being, but also the second-generation writer of Southeast Asian captivity. While the figure of the medical officer offered an image of hope during the experience in the camps, by adopting the medic’s story as his central narrative, Flanagan was able to negotiate profound bodily and affective responses to such a difficult familial history through the familiar discourse of medicine and care.

Flanagan portrays deftly the vital service carried out by the interdisciplinary care teams identified earlier in this chapter. Evans (Dunlop) often strikes a lonely figure throughout Flanagan’s novel, having ‘to project purpose and certainty, even when he had none’. The words of Harry Silman resonate: the ambiguous position of the medic—idolized as a beacon of health and virtue, while simultaneously feeling as sick and ‘helpless’ as others—is found embedded throughout Flanagan’s novel. Yet in his work, Evans (again like Dunlop) is not alone.<sup>45</sup> Echoing the ‘corporate effort of survival’ that Chalker described in his memoirs, Evans works alongside other trades, orderlies, and volunteers to help the men who are sick and dying around him. In a miserable scene halfway through the novel, Bonox Baker, a volunteer nursing orderly, accompanies Evans on his ‘morning rounds’ of the cholera camp.<sup>46</sup> Baker continues his work with Evans despite being skeletal himself. Rather than accepting an offer to remain outside a tent full of cholera sufferers, Baker assists Evans simply because ‘some bloke has to’.<sup>47</sup> This collaborative effort offered the chance to maintain morale—the ‘effort of survival’—while each is pictured enduring their own disease. Flanagan’s narrative recognizes that the leader of that effort, the medical officer, was key in ensuring efficiency and instilling hope. In this way, the work to control disease becomes for the second generation a metaphor for the need to battle against a common enemy, even when men were captive forces without arms to fight.

By adopting the appellation of ‘Big Fella’, Flanagan’s narrative signifies the trust that PoWs placed in the abilities of medical officers, believing that they would be strong leaders as well as effective medics. There was a ‘desperate need’ among incarcerated troops to seek solace in a ‘noble’ and ‘self-sacrificing’ character who could guide them through the degradation of contagion.<sup>48</sup> Placing this faith in the medics did not come without its challenges. Certainly, Dunlop did not initially appreciate his commanding role, writing in his diary on 9 September 1942: ‘I do not particularly want the job of commander, but I will carry on’, adding the

caveat that this depended on there being ‘absolute support’ for his position.<sup>49</sup> Like Dunlop, Flanagan’s medic does not relish the prospect of offering leadership and solace as part of his role. In being called the ‘Big Fella’, Evans believes that this adulation from his men ‘trapped him into behaving as everything he knew he was not’.<sup>50</sup> As the prevalence of disease increases in the novel, and death becomes a daily occurrence in the camps, the provision of medical care becomes for Evans ‘an immense charade’. In this ‘charade’ the doctor is regarded by Evans himself as ‘the cruellest character’, for he is a man ‘who proffered hope where there was none, in this hospital that was no hospital’.<sup>51</sup>

Such pronouncements of a ‘hospital that was no hospital’ echoes other contemporary Australian fiction that has emerged from the history of the Thai–Burma railway and its aftermath. Published just two years before Flanagan’s novel, Mark Dapin’s *Spirit House* depicts the experiences of Jewish PoWs on the railway and the inter-generational transmission of this history between grandfather and grandson. When former PoW Jimmy tells his grandson David about prisoners going into hospital in the camps, the young boy queries the use of the word ‘hospital’. ‘There was no Royal Prince Alfred’ replies Jimmy, in reference to one of Australia’s major teaching hospitals; ‘there was no equipment in the hospitals, no drugs. The only thing they had in common with hospitals was diseases.’<sup>52</sup> Former medical officer Hugh de Wardener advised in *The Lancet* in May 1946 that ‘the term “hospital” is not to be misunderstood’:

It was a name given to that part of the camp in which the most serious sick were placed. It differed in no way from the rest of the camp as regards accommodation and food ... At the onset of the [cholera] epidemic there were four tents for the sick: one each for malaria, dysentery, diphtheria, and one for surgical and general medical cases. Only very serious cases were admitted, as the facilities were totally inadequate for the number of hospital patients in camp.<sup>53</sup>

By drawing on the ‘name given’ to ‘that part of the camp’ for ‘the most serious sick’, the very idea of a familiar medical discourse, however forced it may have been, was likely integral to a PoWs’ ability to survive such wholly unfamiliar experiences. Dapin and Flanagan show that the ‘charade’ of the ‘hospital’ combined the finely executed elements of a necessary performance. Indeed, in *Narrow Road to the Deep North* Evans compares his work to the theatrical recitals and plays that many troupes

of men devised to entertain their campmates and boost morale.<sup>54</sup> Just like those performances, the ‘charade’ of hospitals and doctoring in the camps is, for Evans, an ‘absurd ... representation of reality’, but still—crucially—‘somehow real’.<sup>55</sup>

What Flanagan’s novel portrays is the deeply rooted need for PoWs to rely upon a familiar—‘real’—discourse of disease and its care. That discourse, whether it was the ‘physiotherapy department’ or ‘operating theatre’ created out of bamboo huts in the jungle, was implemented to create a sense among PoWs of remaining in control of their wellbeing and survival. In post-war years, the depiction of the medic enabled a younger generation to access the experience of captivity through the familiar discourse of disease.

## CONCLUSION

When Henry Traill wrote of the body of a friend who had died from cholera, he knew that he had become numb to grief.

Impassively we saw it. Could we then feel no sorrow? No fear? No deep emotion? We saw only that the sun was shining; felt only that it was warm on our shoulders. We saw the jungle around us; we comprehended the Japs, our being prisoners, the epidemic of cholera. And we saw the frail form, outlined in the sacking, that was Johnny; and a stray lock of his hair which was blowing in the wind.<sup>56</sup>

For men who were sick, cholera represented the death to which they all knew that they could succumb. There was no energy to grieve, and no time: the work they were sent on was relentless, the need to conserve their mental energy was supreme. In the aftermath of captivity, many would speak of how cholera remained in their nightmares post-war. Dr. Kamal Khan, consultant psychiatrist at Liverpool School of Tropical Medicine, conducted a study of the psychological aftermath of Southeast Asian captivity and described the vivid images of cholera cremation pyres that pervaded the dreams of men; ‘When the firewood was lit, quite literally what used to happen was that sometimes these bodies would curl up as though the prisoner was still alive and was sitting and trying to get away. That was another nightmare that quite a few of them mentioned to me.’<sup>57</sup>

Despite its restriction to only a small number of camps across Southeast Asia during World War II, it is perhaps not surprising that the deadliest, most dreaded aspects of the experience of captivity were the ones to

capture the imagination and remain embedded in the minds of those who were to witness it—and the responses of younger generations who heard.

Edward Dunlop's diary provides a detailed contemporaneous account of how the fear of cholera gripped those in captivity during captivity itself. The courage of photographer George Aspinall and PoW artists such as Jack Chalker and Ray Parkin enable us to examine a visual record of cholera in the PoW camps along the Thai–Burma railway. At times, the pictures are as visceral as the subject that they depict. But as reportage, documentary evidence, and life narrative, PoW art has enabled the communication of a traumatic history while reporting the medical facts of tropical diseases that they had not previously encountered.

The experience of cholera itself was a ferocious and shocking one. The fear of contagion dominated the thoughts of medical officers, and the realities of the disease separated friends and support networks—the severity of the disease's symptoms at times rendering men unrecognizable to their companions. But the breakout of cholera also created the potential for the development of new communities: communities of care. These comprised not only medics but interdisciplinary teams that drew on the skills and expertise of individual men in the camp: engineers, carpenters, tinsmiths. Perhaps most crucially for long-term understanding of the disease and its symptoms, the artwork commissioned and published by medics in the aftermath of the war enabled younger generations to access the histories of captivity through the lens of contagion. Such a key role for the medic and his work is most poignantly and extensively explored in Richard Flanagan's second-generation novel based on Dunlop, *The Narrow Road to the Deep North*. Where men were segregated through disease, they were also brought together through the need to care: in post-war narratives, communities of contagion have instilled hope and remembrance as much as they did fear and isolation.

## NOTES

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# The Burial Pit as Bio-historical Archive

*Lukas Engelmann*

## INTRODUCTION

Biohistory has a bad reputation among historians.<sup>1</sup> Simplifying a broad range of historical developments through the lens of evolutionary laws has attracted much criticism and open resistance. It is easy to dismiss the fatalistic narratives of lasting biological underpinnings that determine the inevitable decline of civilization.<sup>2</sup>

But how should we separate polemical takes from rather moderate approaches in ecological or environmental history? When authors ask for the historical integration of the biosphere into historical inquiry to understand the relationship between biological systems, evolutionary processes, and human cultural and social developments, historians appear to be uneasy. Questions of biological determinism, hierarchies between the hard facts of evolution and the soft narratives of social and cultural processes as well as disputed aspects of what should and should not count as evidence

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structure some of these heated conversations. At stake, it seems, is the relationship of traditional historical scholarship with the practice of understanding biology in history and interpreting history biologically. Last, but not least, the endeavors of interpreting the past through biological definitions from the present arouse suspicions of anachronism: can the biological categories of today actually assume immunity against the course of time and do they allow for an enhanced interpretation of past events? And can biological ways of doing history unearth forgotten cultural practices and improve the understanding of complex demographic developments?

The plague pit has become a prominent arena in which these questions are debated. A plague pit is usually seen as the remains of a mass grave that was purposefully created as a burial ground for victims of the plague in both medieval and early modern times across Europe. Fueled by concerns of contagion, by religious beliefs, or simply by logistical constraints, plague pits such as the plague cemetery in London's Royal Mint have left a rich archive of the plague of the past. Historians as well as archaeologists have unearthed and analyzed many aspects of the plague since this pit's careful excavation by the Museum of London in 1988.<sup>3</sup> Social and cultural history have been enriched through the interpretation of bodily remains, the location of the burial site, its reflection in historical documents, and its differences from normal burial rites and places. In addition, the plague pit has now become the site for a biohistorical inquiry, as traces of bacterial DNA in the bones of plague victims make the burial site a biological archive (Fig. 1).

The new way of using and interpreting burial grounds of plague victims in the recent past reflects both awkward tensions and substantial questions about how to conduct a proper history of plague. In this chapter, I take the plague pit as a theoretical and practical site for historical inquiry to discuss issues around the emergence of bio-historical frameworks that have reshaped the writing of history of diseases and epidemics. For each historical approach, ranging from archaeology to social history, and from epidemiology to microbiology, the plague pit takes on the shape of an archive or a vault of evidence. It contains indices and traces that allow for various interpretations of and relations to the past. Despite fundamental differences between the sciences and humanities in terms of technical approaches, methodological formats of inquiry, and disciplinary identities, they share an interest in and a reliance on the plague pit as an archive. Approaches from social history to microbiology share across the disciplinary divide the trait of being what Lorraine Daston has described as 'sciences of the archives'.<sup>4</sup>



**Fig. 1** Human bones and skulls in a brick-built pit. *Photo L0001903*, Wellcome Library, London

My argument considers a recent bio-historical reconfiguration of the plague pit in order to make a larger point about the relationship between history and biology. In other words, I will reflect upon the conduct of historical analysis in the humanities and in the life sciences. I ask to what extent the plague pit has informed and structured various historical approaches and how these historical modes of questioning have positioned the plague pit as a disciplinary archive. The first section summarizes claims about the plague pit made by traditional history, archaeology, and microbiology to draw out the spectrum of methods applied to the pit and its human remains. In the second section, I consider the history of plague in the biological sciences to point to the persistent lack of perspectives from the field of the history of science. To this end I will carve out elements of historical epistemology that have been widely overlooked in current writing on plague's biohistory. The chapter will conclude with a reflection on the subject at the heart of these inquiries to show that plague history is inevitably a biohistory. The aim of this chapter is to draw out pathways in which we can detach the term from its halo of simplification, ahistorical judgment, and timeless governing principles. This analytical appropriation of biohistory forces us to reflect on biology in history as well as on history in biology.

The significance of plague pits has drastically changed within the last two decades, during which time we have seen an avalanche of publications on plague pits and their changing purposes as sources for microbiological inquiries into plague's past.<sup>5</sup> Once mere dots on the maps of plague's historical geography, burial sites have become archives through which the history of plague is rewritten. To traditional historians and archaeologists, the content of the plague pit was largely indicative of cultural traits, local customs, and perhaps specific burial rituals (or often the lack thereof). The identification of a burial ground as plague pit depended usually on historical records but was sometimes supported by closer archaeological analysis.<sup>6</sup> To the historian, the plague pit appeared to be an archive from which one could inquire about the time and the place in which plague had struck, and at times the burial site provided a window into history's forgotten sediments.

In recent writing, which is not confined to journals of natural sciences and biology, the plague pit has become a different kind of archive.<sup>7</sup> Its content—corpses and the remains of bacterial DNA—have lifted the plague pit into the ranks of biological databases.<sup>8</sup> The plague pit has

become an archive of evolutionary variety and biologically identifiable objects: a place in which to conduct microbiological experiments, to identify molecular clocks, and to plot phylogenetic trees. In the eyes of scientists, the plague pit has become an instrument of historical falsification. In an almost binary sense the question is reduced to that of verifying the absence or presence of DNA traces, as tests provide clarification about the identity of the disease that originally caused the burial site to be dug and filled with cadavers. Numerous projects have been developed to draw a new map of plague outbreaks of the past, with the testing of human remains determining the appearance of the burial site on the plague map.<sup>9</sup> Brand new technologies, developed to salvage information from biological remains, have succeeded in establishing a new gold standard of evaluating the historical presence of plague in any place and time over the range of over 4000 years.<sup>10</sup>

The transition of plague history and the emergence of the ‘genetic paradigm’ reiterates the historic moment of transforming plague from a disease, usually defined through the appearance of its symptoms in a confined space, into a disease driven by and diagnosed through a bacteriological agent.<sup>11</sup> As Lester Little has recently pointed out, the bacteriological foundation of plague in 1894 by the French physician Alexandre Yersin was accompanied by a paradigmatic change in seeing and understanding the epidemic. New methods of bacteriological testing, available for plague since 1894, were used to confirm the presence of the disease, which was known until then exclusively through historical descriptions and records. Bacteriology, however, quickly exceeded its status as a confirmatory praxis and established ‘an entirely new gold standard, namely the presence of *Yersinia pestis*, for identifying plague’.<sup>12</sup> Similarly, for the last 15 years, the historiography of plague has found itself confronted with the establishment of a new gold standard that is supposed to exceed the quality of descriptions and which provides far more than just confirmatory evidence for the broader field of medical history. The question is thus raised as to what kind of history this method produces.

This chapter attempts to undermine the habitual opposition of perspectives from the humanities and sciences in the historical study of plague. I argue for critical reflection and interdisciplinary collaboration and point beyond the compartmentalization of plague historiography toward practices adopted in contemporary medical knowledge production. Standard discussions of this issue have focused on possible inaccuracies, questioned the validity of the scientific method applied, or queried

the relevance of the identification of a pathogen to understanding the historical configuration of the disease's vectors. In this chapter, however, I approach the topic from a different angle. A question that might escape attention in the heated debates over the accurate application and interpretation of scientific data in historical records is the use of history and thus the question of why and to what end the history of diseases such as plague is conducted at all. Questions that should be raised include what do we hope to establish if we apply a modern technology of disease definition to make sense of a disease in historical periods where such methods were not available or of any relevance to the experience, understanding, and engagement with the disease? Why is the integration of techno-scientific methods, such as the molecular clock or phylogenetic modeling, excluded from the accusation of 'presentism', that is, of overshadowing the particularities of a historical event through a system of thinking that is in its entirety foreign to that historical period? What kind of historical philosophy is implied and practiced when a scientific method is adopted in the historiography of a disease in accordance with its assumed universal validity? How, thus, can the history of a disease be brought into a conversation with the history of the very scientific practices that aim to plot accurate and enduring timelines of the disease? Finally, does this process change the idea and concept of disease that rests at the heart of these historical inquiries by providing new frameworks to see the epidemic's past, which in turn impacts its contemporary appearance? While this chapter will not provide answers to all these questions, it will draw out the conditions under which answers could and should be articulated.

### THE PLAGUE PIT IN HISTORY AND HISTORIOGRAPHY

The systematic transformation of the plague pit prompts us to ask how historians and archaeologists used to engage with the burial ground and how it was previously configured as an archive containing historical evidence. Over the last two centuries, often-accidental encounters with plague pits served as evidence for historic outbreaks leading to research on the historic circumstances of an outbreak, and its reflection and confirmation through other sources. The geographical aggregation of plague pits allowed historians to connect the dots and to increase the accuracy of the geographical history of plague. Each pit confirmed another locality of the same or a different outbreak, each pit enclosed its own story and context yielded its own relevance to a local history

affected, ignited, or overshadowed by one or more plague outbreaks. In a way, the plague pit worked as a portal into a time of historic plague, inviting the historian's immersion into the outbreak's sediments to arrive at conclusions on the history of plague as a history of civilization.

A classic example for an almost mystical approach to the burial grounds can be found in the work of the nineteenth-century historian of wages and labour James Thorold. Thorold wrote in 1894:

Every town had its plague pit [...] Some years ago, being at Cambridge while the foundations of the new Divinity School were being laid, I saw that the ground was full of skeletons, thrown in without any attempt at order, and I divined that this must have been a Cambridge plague pit.<sup>13</sup>

The plague pit was perceived as a rather regular occurrence, its recognition as a grave for victims of the plague was often 'divined' from the absence of order. Many similar descriptions owe their characteristics—unseparated graves, scattered bones from many victims, and a dedicated burial site beyond the churchyard—to the renowned description of Boccaccio, whose narrative shaped a medieval 'standard model' of what a burial site needs to look like to become recognizable as containing the remains of plague victims. Boccaccio described the Florence outbreak of 1348:

Hallowed ground could not now suffice, for the great multitude of dead bodies which were daily brought to every Church in the City, and every houre in the day; neither could the bodies have proper place of burial, according to our ancient custome: wherefore, after that the Churches and Church-yards were filled, they were constrained to make use of great deepe ditches, wherein they were buried by hundreds at once, ranking dead bodies along in graves, as Merchandizes are laide along in ships, covering each after other with a small quantity of earth, and so they filled at last up the whole ditch to the brim.<sup>14</sup>

In classic historical accounts of the plague such as Johannes Nohl's 'The Black Death', from which the above quotation of Boccaccio is taken, the plague pit had no immediate significance. It stands among other indices, visual inscriptions of the 'dance of the death', countless records, letters and reports, registers to evaluate death rates, and lively descriptions by Boccaccio and others that bring the history of plague alive in 'vigor and vividness'.<sup>15</sup> The burial and its representations tended

to illustrate the narratives of plague, rather than serving as evidence in and of itself. Books and publication that focused on economical, ecological, and epidemiological conditions of the disease's history throughout time disregarded the significance of plague pits. They are mentioned for example in Gottfried's 1983 history as indications of changing cultural attitudes to death and dying, thus indirectly contributing to a transformation of the social ecology of the epidemic, but the appearance and contents of the burial site remained secondary throughout the book.<sup>16</sup>

London's plague burial sites, especially the East Smithfield cemetery, have traditionally captivated an archaeological audience. Here, the pit takes center stage. Hawkin's analysis from 1990 begins with the excavated structures, the positioning of bodies, and the state of the bodily remains to explore conclusions about the city's management of the outbreak between 1348 and 1350. The interchanging pattern of graves and trenches did not only suggest a varying number of plague cases and thus a fluctuation of the epidemic's severity over time, but furthermore indicated a concerted effort by churches and the authorities to bury plague victims in 'specially created cemeteries, rather than the churches and churchyards'.<sup>17</sup> A 2008 paper on plague archaeology gives further insight into how this plague pit served as an archive for archaeological inquiries. The pit is confirmed to have been used for victims of plague through written records, and Daniel Antoine emphasizes the 'unique assemblage' the burial site provides to researchers interested in London's plague. While its contribution to identification of vectors and other details of a zooarchaeology of plague is only limited—due to 'poor preservation of invertebrates, including fleas'—the pit can be exploited for a better picture of the 'epidemiological environment' of plague.<sup>18</sup> Living conditions may be reconstructed, based on experimental archaeological reconstructions, to further elaborate on the appropriate epidemiological environments for the bacteria and possible vectors. But the author points out that attention should focus on the assemblage itself. In archaeology, the assemblage refers to a 'group of artifacts recurring together at a particular time and place, and representing the sum of human activities'.<sup>19</sup> Assessing the particular assemblage of the London plague burial site, Antoine argues, requires us to factor in additional circumstances, such as the acidity of the soil, before 'criteria of authenticity' are developed in order to determine the burial site to be indicative of a particular disease outbreak.

For Vanessa Harding, the plague pits of London provide such an assemblage to elaborate on a number of social and cultural aspects of the 1625 plague outbreak. In her work, the burial site takes on the role of an archive of normal burial rituals and the local government's practices and helps to achieve a deeper insight into the historical epidemiology of the disease. How plague victims were buried, how the corpses of 35,000 people in 1625 and about 69,000 in 1665 were disposed of, challenged established responsibilities between the parishes and the central authorities.<sup>20</sup> Throughout archaeological investigations, the plague pit thus offers more than a mere verification of a historical datum of an outbreak: its contents, their arrangement, and their preservation over time allows for the limited reconstruction of a past context in which the outbreak occurred.

In 1998 the plague pit began to take on a new role. With the detection of traces of *Yersinia pestis* in the 400-year-old pulp of dental fragments taken from a burial site in Marseille, attributed to an outbreak from 1722, it became possible to remove controversy about the cause of death for those buried in the pit.<sup>21</sup> It was possible to identify the bacteriological agent that was understood since 1894 as necessary cause for plague. And with the entrance of microbiologists into the historiography of plague, a series of publications began to shift the economy of traces, historical sources, and evidence. In 2002 Michel Dancourt used the momentum of his 1998 paper to point to the now-apparent 'limits of historical descriptions of plague'. Where paintings and written accounts present only clinical and epidemiological indications, the information inevitably remained further shrouded as problems of translation and the historical 'lack of precise medical terms' failed to allow for an accurate historical diagnosis of plague.<sup>22</sup> Quickly, the 'biology of plagues' aimed to solve contemporary epidemic puzzles with the now available ways of understanding the precise developments, distributions, and effects of historical outbreaks.<sup>23</sup> A new biohistory was conceived, partly committed to the falsification of historical plague data and partly a 'reconstruction of the human biology of past populations'.<sup>24</sup>

Turning away from a specific locale, which was indicative of probable historical outbreaks, the plague pit's significance nowadays lies within its contents, which have preserved biological traces of pathogens. Previously, the plague pit allowed for the identification of the coordinates of historic outbreaks, it delivered assemblages for the interpretation of demographic impacts, and it enabled the analysis of cultural practices of containment

through burials. And, clearly, the plague pit has inherited over the time a certain halo, represented in countless literary accounts, artistic representations, and historians' fascination with the traces of historic disaster, which often leap—as in the case of the London Crossrail—into the present by disrupting various excavations. With the development and refinement of the microbiological analysis of historical or ancient DNA, the pit's significance has shifted from a complex point on the map of plague history to a place in which the map of plague history is redrawn. First and foremost, the analysis of DNA taken from the human remains found in burial sites has become decisive for the site's identification as a plague pit. The 'divination' of a burial site is now secured through the rigor of scientific practice, carried out in the laboratory as a retrospective diagnosis based on the presence of traces of *Yersinia pestis*, the bacterium responsible for plague outbreaks. Second, this data is used to arrive at different historical geographies of plague distribution, correcting existing narratives, proving some assumptions about the disease's medieval appearance as wrong and illuminating others in a new light.<sup>25</sup> Third, the collected data from plague pits of all periods and places is increasingly used to refine the historical standard model for plague outbreaks to correct the persistent narratives on plague, for example in India.<sup>26</sup>

This transformation has yielded a mixed reaction. Some have asked why the many papers published since 1998 on the microbiological history of plague were not co-authored by acknowledged historians, experts on the historical events now rediscovered by microbiologists.<sup>27</sup> Others have insisted that historians simply cannot ignore the findings of another discipline and have to work on understanding and comprehending the microbiological ways of reasoning, while others still have mapped out in great detail the contours of the controversy stirred up by the 'plague historians in lab coats'.<sup>28</sup> Throughout the controversy it appears that some historians have found arrangements with microbiologists that have led to successful collaborations and have brought forward a new methodological underpinning for the plague's biohistory. The recent special issue by Monica Green, 'Pandemic Disease in the Medieval World', illustrates one productive way in which this can be done.

Considering the complex dimensions of plague history, Green suggests a compartmentalization of plague history: microbiologists work on the pathogen, entomologists study the anthropoid vectors, zoologists are responsible for the mammalian hosts, and bioarchaeologists become the guardians of the retrieval of material remains, so humanists (historians,

linguists, and art historians) can reconstruct the ways in which humans contributed to the creation of conditions ripe for the amplification of plague and can also study the human responses to catastrophic mortality.<sup>29</sup> While this distribution of disciplinary competences seems fair and neat on first sight, it carries certain problems. First, not all historians share enthusiasm about the value of ‘retrospective diagnosis’.<sup>30</sup> It remains questionable if all historical processes related to disease and epidemics can best be understood and illuminated in their depth and difference if approached solely through the categories of contemporary medical classification systems. In other words, a historical perspective on plague outbreaks of the past that is mediated through the lens of microbiological analysis serves first and foremost a very contemporary set of questions: what is plague, how should it be seen, and how can its historical investigation further increase the quality of its classification? The question that this in turn raises for us is whether this approach should be the purpose of all historical perspectives on plague.

To consider a historical account of plague inevitably attached to the production of the disease’s natural history presupposes that the purpose of historical analysis is to contribute to the disease’s classification in contemporary science and medicine. Such a topography of historical and biological perspectives risks impoverishing the breadth of perspectives in the history of science and medicine. What if the historian’s questions extend to the ways of knowing plague before bacteriology? Does the microbiological verification of outbreaks help to understand ways of thinking and seeing plague that had perhaps fundamental implications of how the disease was acted upon, experienced, and dealt with? If we take for example the case of an outbreak just 15 years before the discovery of *Yersinia pestis*, retrospective identification hardly helps to sharpen the historian’s sense of the peculiarities of the time and place. In 1879, when plague arrived at Vetlyanka, the medical frameworks of its understanding were lodged between systems of hereditary and sanitary concepts. This understanding of plague between kinship and landscapes was essential for the development of sanitary strategies in the Russian Empire as well as proving beneficial to the development of clinical categories of plague that were characterized as minor or ambulatory and which remain in use until this day.<sup>31</sup> This leads to further questions: were inconsistencies in the definition and understanding of plague always seen as problematic, or might we find traces of thinking about plague in the past that do not

translate into modern modes of separating and identifying disease entities along their etiology?

Furthermore, Green's fair distribution of disciplinary responsibilities in the history of plague seems to resemble the architecture of medical knowledge production in the present. With the pathogen delegated to the microbiologists and laboratories, it is in the softer fields of ecology and epidemiology where historians and archaeologists might find a place for useful contributions.<sup>32</sup> While there may exist convincing arguments for distributing historical analysis along the gridlines of contemporary systems of medical knowledge production, the question remains as to whether the relegation of historical writing to ecologies and their epidemiological impacts should indeed be the dominant framework for formulating historical questions about plague within the humanities. Is the history of plague predominantly a natural history, and are inquiries into the social and cultural surroundings of past epidemics subservient to the production of coherence and continuity of medical and scientific categories? Accepting such stipulations in the history of plague and other diseases and epidemics would risk a serious impoverishment of the perspectives that have been developed within the history of medicine and science. And, more crucially, such frameworks tend to endanger those disciplines' capacity to enable critique of current science and medicine through the past as a repository of difference.

This is not a moral issue, and instead of arguing for a right way to approach the historical subject of plague, this contribution aims to shift the debate away from established controversies about DNA methods or the lack of microbiological expertise among historians. Instead, the arena of plague history can provide a scene for re-engaging with discussions about the purpose of doing and writing history as much as it excites a critical interrogation of the history of biological interpretations of history. The plague pit as a versatile historical archive invites further reflection on the ends to which its contents are exploited and how different uses and practices of historical inquiry map onto the divide between the sciences and the humanities.

## PLAGUE HISTORY, THE BURIAL PIT, AND THE SCIENCES OF THE ARCHIVE

In her contribution to an *Osiris* special issue, the ‘Challenges of History’, Lorraine Daston provided a brief overview of the ‘Sciences of the Archive’. Where the contrast of history-conscious humanities is usually plotted against the empirical sciences, which often remain oblivious to their own history, the position and production of the archive allows for the identification of some similarities across the big divide. ‘Since the mid-nineteenth century’, Daston writes, ‘it has been a melancholy academic commonplace that whereas the humanities are the guardians of memory, the sciences cultivate amnesia.’<sup>33</sup> The habitual opposition between the sciences that often disregard even two-year-old papers as valid sources and the humanities that occasionally dwell in countless reinterpretations of a classic text has often, but not exclusively, been organized around the disciplines’ relation to their own history and to their archives. A timeless perspective began in the nineteenth century to characterize the German project of the *Naturwissenschaften* and a ‘deeply historical sensibility’ shaped accordingly the identity of the *Geisteswissenschaften*. Since then, the humanities have come to consider history as an essential element of their discipline, while many scientists increasingly think of the history of their own discipline as unusable. Where the humanities examine, interrogate, and scrutinize the work of intellectual forbearers, the sciences tend to merely invoke the legacy of Galileo, Newton, and Darwin. In other cases, history is brought up to correct the record and to firmly place accurate contemporary science at the end of a historical series of more or less excusable mistakes and errors.

But revisiting this grand narrative of antagonism produces a different story. Daston sees the archive as a shared concept across the humanities and sciences and asks for the interrogation of the point of departure for the archive’s application in the sciences and in the humanities. History has been crucial to many sciences, as some of the phenomena studied across the sciences could not have come into existence without considering their development over long stretches of time. Obvious examples include astronomy, geology, meteorology, demography, and—closer to the examples discussed here—the history of evolution in and for biology. Characterizing these fields as sciences of the archive achieves a renewed evaluation of the role and significance of the archive and of archival

practices for the identity of a discipline such as biology. But furthermore, these sciences do not only engage with subjects that potentially stretch over long periods of time, sometimes from the past over the present into the future; they also engage in practices of ‘collection, collation and preservation’ to envision a community of researchers that transcends past, present, and future.

When microbiological research in plague follows the pathway of a historical inquiry, it is worth considering how this inquiry is modeled into the circumstances of scientific research. Building robust databases, large-scale datasets, modeling maps of outbreaks, and structuring the historical distribution of the occurrence of *Yersinia pestis*’ biovars is undertaken to contribute to a lasting archive of data on plague, whose continued exegesis will refine and define knowledge of plague in times to come. The history that is practiced defines the plague pit as a container of traces that validate the continued identity of plague across times and places. Stitching together burial sites from centuries and continents establishes pictures of longevity, of the timeless stability of the entity of plague’s causal agent, and, in turn, guarantees to the researching discipline the validity of its claims and objects of knowledge. ‘History in science’, Daston argues, ‘differs from most other kinds of history by its curious indifference to the contours of time.’<sup>34</sup> Time in these investigations of plague’s natural history appears as a flat expanse, *Yersinia pestis*’s presence is accounted for beyond periods, epochs, political and social geographies, and beyond the lived realities of a different time. Preserving the specimen’s identity across times and places conserves not only its epistemic stability, but also grants its recognition through the maintenance of the discipline.

Traditional historians, on the other hand, have usually approached the plague pit within the mold of its time. The interest of many historians was initially drawn to a plague pit as a site of uncovering a different world, an unusual pattern, or an overlooked chapter with a capacity to draw out difference instead of continuity. A historian’s work is thus periodization, the definition of liminal spaces, and the production of discontinuities, separating one outbreak from the other, engaging in the specific qualities of a plague pit’s assemblage to distinguish it from the churchyard’s graves. The purpose was to decipher traces of social and cultural life that point beyond contemporary imagination and beyond the expected images and pictures of what a plague outbreak and its burial sites would look like. The historian’s interest in plague history has been understood to invest in pathways

through periods, to create chronologies of historical events and maps of forgotten and unknown territories. Against the biologist's grand narratives of the historical stability of its research objects, the historian seeks first and foremost to make sense out of countless different historical chapters; an endeavor that cannot escape its fate of being 'perpetually controversial'.<sup>35</sup>

### A BIOLOGICAL PRESENTISM?

The common rejection of a historical perspective that emphasizes the continuity of its subject across epochs and continents is grounded in the accusation of presentism. But does this microbiological configuration of plague history—in which a broad variety of events from different times and places is subsumed under the singular rubric of plague—present a biological presentism? Traditional historical scholarship problematizes presentism as the practice of judging phenomena of the past through an uncritical adherence to the attitudes, values, and concepts of the historian's present-day world.<sup>36</sup> The cardinal sin of historians is to engage in a dramatic reduction of their political and intellectual capacities by engaging in anachronism. The fallacy of such approaches to history is supposed to be found in the lack of attention to the differences of the past; history itself risks becoming flattened as contemporary views are superimposed over the course of events of a distant and distinguishable past.

In plague history, these issues are ubiquitous. But they matter perhaps even more in the historiography of the third plague pandemic, which is assumed to have begun in 1894, the year in which the plague pathogen was defined.<sup>37</sup> Challenging the 'revolutionary' nature of the bacteriological revolution in the late nineteenth century has become common historical practice, but looking at the nitty-gritty of how this new laboratory science failed to provide convincing solutions in the containment of plague at the turn of the century requires a critical distance from modern scientific perspectives on the outbreaks in Oporto, San Francisco, Mumbai, or in Manchuria.<sup>38</sup> If we look for example at different sources, such as photographs and their archives, we find a rich resource of symbolic and material obstacles to the flattening of plague history into a trans-historical biological entity. Photographs in particular are pertinent in resisting the framing of past conflicts through present-day solutions as they invoke impressions of unusualness and uncertainty.<sup>39</sup> But it is also in the photograph where the critique of presentism finds its own limitations: neither a window into the past, nor an empty canvas for new

information, the photograph maintains a critical suspension between the past event and its mediated observation in present.<sup>40</sup> One might add that, similarly, the writing of any history cannot release itself from its ‘presentist’ perspective, as any historical question is inevitably based in the temporal conditions of the time of its articulation. The question remains therefore as to whether the accusation of a biological presentism has any deeper value.

Within the history of science and medicine there have been intense debates on the issue. To interrogate the science of the past without judging its expertise and standard of knowledge with explicit reference to the present presents a ‘whig interpretation of history’.<sup>41</sup> As Nicholas Jardine pointed out, ‘whig’ history became a shorthand in the 1970s to denounce hagiographic, triumphalist, and positivist approaches that supported the grand narrative of progress in science.<sup>42</sup> But beyond the simplified ideas of historical immersion, resuscitation, penetration, and reconstruction of past experiences, H  l  ne Metzger was already, in the 1930s, well aware that it ‘is impossible to avoid presentism completely’.<sup>43</sup> Where the critique of presentism has served to challenge a historiography that celebrates modern science as the ultimate judgment of past knowledge, the term has come, rather, to designate the inevitable influence of the present in the interpretation of the past. To this end, historians of science have been compared to anthropologists, who must, despite their intentions of immersion into the ‘other’, maintain their ability to speak to the concerns of the non-native world.<sup>44</sup>

The rejection of the historian’s ability to investigate history in its own terms, dislodged and disconnected from present occurrences, trends, and influences was also a key concern of the early *Annales* School in France. Proponents of the school spoke repeatedly of a ‘historiography of the present’, pointing to the impossibility of resurrection. Influenced by the introduction of relativity into physics, the school’s historians found support in science’s theoretical innovations and ventured to destabilize the point of origin of historical research. Not only the present, they concluded, but also the past undergoes a continuous transformation. A historian’s work therefore does not begin with the archive, but with the question.<sup>45</sup>

Among the proponents of the archaeological models of historical inquiry usually associated with the *Annales* School is Georges Canguilhem, who argued emphatically for a history of science or perhaps a historical epistemology, which had to distance itself from the

objectives and objects of science.<sup>46</sup> In accordance with Gaston Bachelard, Canguilhem argued for an educated ignorance in respect of scientific objects and their ‘ontic status’, so as to engage instead with the norms and stipulations that were invested into the observation, analysis, and understanding of the object. ‘The question of history’, as Thomas Ebke summarized Canguilhem’s work, ‘is linked to the normative stakes, the *enjeux* that are inscribed into a phenomenon.’<sup>47</sup> Worried by biological determinism, and as a historian who was concerned with the ‘value of the living and invested in defending it against rationalization’, Canguilhem saw the purpose of doing history in the destabilization of the system of knowledge that presents itself as the exclusive ‘fount of truth’ and that had acquired the power to render its opponents and defectors as historical errors, prone to fallacy and delusion.<sup>48</sup> The question to be raised in microbiological assessments of plague history would thus be: what are the normative stakes that had been invested in the analysis of a historical presence of plague bacteria in burial sites across times and places?

But Canguilhem’s contribution to the history of science points beyond Bachelard, as he carved out the particularities of the history of the life sciences. Here, the objects of scientific research maintain their own historicity, as they are considered a living phenomenon, which has its own history as it relates to its environment and context, and crucially ‘they attach a value to the way in which they interact with the environment’.<sup>49</sup> As Canguilhem reminds us in his seminal essay ‘On the Normal and the Pathological’, all living phenomena need to be evaluated in their polarity between life and death. Out of this predicament, a set of norms emerge which impact both the biologist’s and the historian’s understanding.<sup>50</sup> Rather than a biohistory that extrapolates the course of history from its smallest entities to its largest trajectories as being governed by irrefutable natural laws, Canguilhem argued for a biohistory in which the structure and course of history, both for the microbiologist’s as well as for the historian’s judgment, is traced back to the activity of the living in its environment. In other words, interest in the ancient DNA of *Yersinia pestis* would not only lie in methodological falsification of its absence or presence, but would engage with the question of how this presence has recursively contributed to the configuration of assemblages such as the burial pit. Such a historical assessment allows the historian then to trace back the series of normative assumptions that have been invested in the separation of the bacteria from the conditions of its recursive existence, both in the scholarship of historians and of biologists.

In reviewing Jacques Ruffié's *De la biologie à la culture*, Foucault compared the problems of biohistory to his analytical framework of biopolitics. He writes in 1976:

Experience has taught us to be wary of grand monumental syntheses that take us from the infinitesimal point of the molecule all the way to human societies, traversing at a gallop the entire history of life across thousands of millennia. This 'philosophy of nature' which evolutionism once produced in abundance, often brings out the worst.<sup>51</sup>

Rather than falling into the trap of a biohistory that emphasizes the unitary and mythological history of human species across times, Foucault identified in Ruffié's work a history of communication and polymorphism, a history in which neither the biological object of research, nor the norms and assumptions that inform that research are fixed entities.

The history of plague, read through the biological archive of plague pits, would benefit from a renewed interest in the archaeology of the biological knowledge that is currently rewriting the epidemic's historical record. In other words, a scientific history of plague without a history of science runs the risk of becoming fully integrated into a specific kind of historiography of plague's present, in which neither the underlying norms nor the political and cultural conditions of their production are subject to historical analysis.

Instead of rejecting the significance of biological entities, historians could further invest in the historical epistemology of identifying bacteria as agents of disease and consequently as agents of history itself. Rather than declaring microbiological history a gold standard, historians could invest in the history of such standardization and ask for the grounds upon which one discipline achieves the authority to render other disciplines and their perspectives into unreliable forms of historical narration. Of great value to this task are the many histories of the third plague pandemic. The onset and slow distribution of bacteriological methods, the introduction of the laboratory, and its rejection by doctors and politicians alike were conflicts about the identity of plague. They were examples of arguments for and against bacteriological evidence in order to guarantee the identity of one disease across cities, countries, and continents. During this pandemic, the laboratory eventually achieved an exclusive position of falsifying plague diagnoses, but this was the result of investments in its authority and epistemic stability. Such pathways were

error-prone, structured by ideas and ideologies as much as by epistemic obstacles and hesitant entities. But the sciences are in historical process themselves and, to some, this ability of critical self-transformation is the condition of scientific positivism: of progress.

If historians of plague and plague science take on the same perspective and dedicate historical analysis to the purpose of improving a scientific entity without questioning the historical conditions of its production, they risk diminishing the value of the history of science. If the history of plague integrates the goals of science to produce a truth that is supposed to be exempt from historical transformation, then, following Canguilhem, one might ask whether ‘the history of science [is] anything more than a museum of errors of human reason?’<sup>52</sup> Instead, questions should engage with the conditions under which science’s investment in plague history has gained traction. The specific shape of a biological history of plague should be acknowledged as a history of sameness and identity, which flattens history across continents and epochs and which often contradicts the historical appreciation of difference and contingency. Finally, it is important to reflect on the changing attitudes, values, and norms that underpin scientists’ quest to embed plague’s biology within their own history of refining and stabilizing a community of researchers. Then questions that have been raised about the bacteriological definition of plague after 1894 can be looked at in a new light. What happens if we assume the irrefutable continuity of a disease’s identity and begin to invest in its stability? ‘What conditions need to be satisfied for the claim of sameness, of identity to stick? This is a philosophical and historiographical question and not a technical medical one.’<sup>53</sup>

Thinking about the plague pit as a biohistorical archive forces us to reflect upon the value of history. It prompts us to think about both the definition and refinement of plague as a scientific entity and about the historical subject of plague. The fundamental question remains, however, as to whether the kind of biohistory that emerges from this archive uses its biological truth to craft a conspicuously flattened version of its history, concerned predominantly with the infinite continuity of plague across time and space. The alternative would be for biohistory to claim a commitment to the individuality, the irreducible novelty of each plague outbreak, that situates the microbe and its pathogenic properties within its own temporal and spatial coordinates.

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# Postscript: Epidemic History and the Ebola Present

*James Fairhead*

Many of those who have grown up since the 1960s have had little personal experience of relatively lethal pandemics, so the professionals who might be called upon to address such unpredictable yet socially transformative ‘Black Swan’ events have very little personal practical habitus to inform any appreciation of their social ramifications. The exception is the pandemic of HIV, but while this has afflicted some 40 million people since the 1980s and transformed social and sexual conduct globally, the long timescale in which AIDS itself becomes manifest and its later normalization associated with its medication meant that experience of it hardly informed initial appreciation of the social dynamics involved in addressing Ebola in West Africa and beyond.

There was also little institutional habitus concerning the social nature of epidemics. The World Health Organization (WHO) had stood down its in-house anthropologists during budget cuts some years before the West African outbreak. Afterwards, its Director General admitted that among the ‘lessons learned’ was that its organization did not appreciate how far an epidemic’s social ramifications could undermine

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a medical response: ‘A significant obstacle to an effective response has been the inadequate engagement with affected communities and families.’<sup>1</sup> She called for ‘multidisciplinary approaches to community engagement, informed by anthropology and other social sciences’.<sup>2</sup> While the problem lay with institutional memory, attention to history did not get a mention. The WHO did initially re-employ anthropologists (Julienne Anoko and Alain Epelboin) as consultants who had helped broker the interface of globalized response with communities in earlier Ebola epidemics in Central Africa. Other anthropologists and community development workers of the region became involved, myself among them (e.g. Fairhead 2016), but few, if any, of us had the kind of comparative historical knowledge of pandemics in earlier eras that is developed in this book. There was certainly no institutional ear for it despite the existence of good histories, for example, of social resistance against smallpox epidemic control even in the region.<sup>3</sup>

That the era of pandemics is not over is suggested by the Ebola outbreak and by several apparent ‘close shaves’, such as with H5N1, ‘swine flu’ or ZIKA, and by others that remain under the public radar, but against which major investments are now being funneled to develop vaccines, such as MERS, Lassa, and Nipah Virus, and to develop technologies that might accelerate the capability to develop and produce vaccines against unknowns. It remains absurd, however, that the insights that might be drawn from comparative historical analysis concerning the social dynamics of epidemics and their (mis)handling, past and present, has not been conducted and could not be mobilized. This need makes no naive appeal to a scientific history—of one that might repeat itself in regular ways—but simply suggests that those who are aware even of the debates thrown up concerning the regularities and regular differences are going to be more capable of grappling with the inevitably novel challenges emergent in any new situation. As essays in this book reveal, the ‘lessons learnt’ from the Ebola response have been learnt many times before.<sup>4</sup> This powerful collection of historical essays both provides inductive inspiration for a more systematic comparative endeavor, and its chapter by Cohn develops it. My aim in this postscript is to draw out this aspect of the work by reflecting on each chapter in relation to the social issues that became apparent during the West African epidemic of Ebola (2013–2016).

In recent epidemics, responders who face communities who do not comply with their messaging and policies, and who thus exacerbate

disease transmission, have been inclined initially to interpret this as something to do with local ‘culture’, but then—after precious time and unnecessary mortality—have tended to change the framing to construe non-compliance as a more ‘rational’ cultural (or universalistic) response. This new appreciation is associated itself with a realisation of the social or political ineptness of responders, or of prevailing political and economic realities that shape local possibilities. This change in analytics was seen in the HIV and AIDS epidemic in which early analysis that focused on cultures of sexuality when explaining non-compliance with messages about changing sexual practices were superseded by those that highlighted the stigmas associated with the medical response, or the structural poverty that shaped the capacity for sexual choice and access to healthcare. In the Ebola epidemic response, attention initially focused on non-compliance associated with burial culture, to be eclipsed by ethnographic studies revealing local practices to be rational in the face of inept messaging, or in relation to politically charged community engagement that exacerbated social tensions.

In Christos Lynteris’s history of the discursive unfolding that accompanied the bubonic plague in Hong Kong, we find the same transformation in the way the concealing or dumping of bodies by poor urban residents was framed, and yet hindsight analysis can take us a reflexive step further. Initially the discourses that focused on body dumping and corpse concealment construed them as congruent with ‘Chinese culture’ but over the course of a year or two, this shifted (as with AIDS and Ebola) to worry about the brutality and insensitivity of the sanitary measures themselves and the lack of trust they engendered. Viewed thus, body concealment and dumping was now construed as something particularly un-Chinese, brought on by the insensitivity of British colonial policy: a ‘reaction to draconian administrative measures that broke with the very order of human nature’. This framing was articulated especially by elite Chinese, capturing how the destructive, costly, rough and bullying practices of fumigation teams prompted people to either conceal their sick or abandon their dead. It was anti-cultural. Yet the twist is that both colonial and elite Chinese discourses essentialized ‘culture’, construing body concealment or dumping whether as a normative part of culture or as something that radically violated culture. Both permit policies that can be perfected outside of actual community engagement. Eventually the epidemic ended after concessions were made to communities to ‘self-manage the outbreak’, associated not only with a reduction

in insensitive policy, but also with the new trust derived from devolution that nurtured mutual surveillance.

The way a typhoid epidemic among British forces during the Boer War in South Africa became represented in British media and literature, analyzed here by Jacob Steere-Williams, reveals how the social fallout of epidemics interplays with nationalism and its identity politics. Epidemics say something simultaneously both about the communities they afflict, and about their political antagonists. In this instance, the typhoid epidemic exposed a moral problem in the afflicted British colonial power (a critique of inept colonization, and of degeneration, disillusionment, and emasculation of the military), while their antagonists were blamed for its origins—in this case, the Boers living a supposedly unsanitary, infective ‘culture’. Similar reasoning unfolded among Kissi communities in West Africa, where the epidemic was thought to have exposed assorted moral failings (in not keeping to ancestral traditions, in not keeping to Christian traditions), while at the same time antagonistic outsiders (opposition parties, mining companies, Western scientists) were suspected of having introduced the disease, whether passively or as weaponized. Perhaps, too, we can see this interplay between immorality from within, and cause from without among the ‘international community’ which also found their own moral failings in the epidemic (in their lack of support to local health systems, for example) while attributing its cryptic origins to non-compliant locals in their ‘unhealthy’ customs relating to ‘bush meat’, tampering with bats and deforestation.

Steere-Williams also highlights how epidemics give meaning not just to the idea of the nation, but also to its soil. Indeed, several of these papers focus on how the emerging science of infection implicates dying and the corpse in infecting the soil, turning it into an enduring threat—turning a disease of people into a disease of territory too. Epidemics manifested in the bodies and in the soil they decompose in threaten a ‘national identity’; a colonial identity. While such ideas are associated with the Victorian era, moves to more hygienic cremation (hygienic, that is, for nation) were made during the Ebola crisis, and while the anthropological world was concerned that this would provoke violent or passive resistance in a world where correct mortuary rights are so central to the wellbeing of the living, cremation was apparently oddly less of a flash-point perhaps for such reasons.<sup>5</sup>

That epidemics evoke the framing of essentialized ‘culture’ is ironic given that there is nothing so socially transformative. As the epidemic

unfolded in West Africa, those orchestrating caring and burial practices adapted them to suit the new realities they experienced and the media they trusted. There are a variety of deeply significant ideas concerning an afterlife, how to access it, and how correct procedures are important for those remaining in this life, and yet those responsible for burials nevertheless adapted practices across the region.<sup>6</sup> How epidemics change burial practices in practicable ways is beautifully demonstrated by Joëlle Rollo-Koster in the case of a fourteenth-century pope. During the catastrophic Black Death in which half of Europe died in less than seven years, and the practical experience of infection associated with it, it is perhaps no surprise that papal mortuary practices also changed along with the rest, and was, as Rollo-Koster outlines, shaped by practical not simply theological concerns. A great deal of attention has been paid by historians to the economic fallout of the Black Death and its political leveling, but questions arise here concerning its theological, practical, and ideological outcomes. That changes could be made in seemingly ‘immutable’ papal funerary scripts is echoed in Anoko’s documentation of the ways Kissi speakers found ways to circumvent burial protocols during the Ebola epidemic.<sup>7</sup>

There is something about ‘plagues’ that tempts us to make easy generalizations about their social fallout, whether concerning the ‘breakdown in society’ as kinship ties ‘weaken’, as is often described in the Black Death, or concerning the social fragmentation as blame is attached to marginal communities. That these two are somewhat contradictory might call them both into question. Lizzie Oliver’s inquiry into the cholera epidemic among British prisoners building the Burma–Thailand railway during World War II provides a powerful rejoinder too. She provides an evocation of the heightened sensitivity that emerged concerning all aspects of health and transmission, but one attentive to socially produced self-surveillance. Cholera here was, in many ways, socially productive. This is to be found in the practice of capturing images by camera or sketch—for which prisoners faced enormous personal danger—to produce a form of witnessing that anticipates a powerful social accountability in the future, and which thus established it in the camp. What comes over is the pursuit of a selfless community beyond the artist, doctor, photographer and tin engineers. Such powerful evocations of sociality also echo down the generations in the fiction that it has produced. Camp life exemplifies the more positive side of Foucault’s concept of power and ‘biopolitics’ as medical concerns and medical officers

drive the governance. A ‘make live’ sociality that contrast starkly with the brutal sovereignty of the camp administration rooted in a ‘make die, let live’ episteme.

As Richards argues for Sierra Leone, the Ebola epidemic was so socially productive that it was this, in establishing novel forms of quarantine and care, as much as external health and military intervention that curtailed the epidemic.<sup>8</sup> The instances of violence against humanitarian responders must be seen, too, as a product of social mobilization, not of social disintegration.<sup>9</sup> While there was plenty of TV and photographic documentation footage evoking the contrary, the audience for this was an exterior world peering in that, since the time of Turnbull’s *Mountain People* finds in such catastrophes mythic stereotypes of social disintegration that does social work for its viewers but a disservice to the societies studied. That detailed inquiry recovers new meanings is revealed, too, in Michael Anton Budd’s analysis of the variety of photographic compositions that emerged during World War II discerning regularities in relation to those who capture them. Stark contrasts are to be found in the place of the living and the corpse in images taken by those living the trenches in contrast with those living in hospitals and those missioned to document for other reasons. The Ebola epidemic, too, will also be remembered for its global imagery and imaginary—less in generating empathy than fear and stigma—the objectification of the quarantined other; the incarceration of the quasi-criminal ill.

Christos Lynteris’s analysis of plague science in Hong Kong has uncanny significance for understanding the Ebola epidemic. Scientists became concerned that the plague that they were dealing with did not always manifest in infected patients and worried that it could be carried by survivors and the non-symptomatic. The existence of such ‘ambulatory plague’ was the cause of much scientific speculation and inquiry and paper discerns how this related to the different biopolitical implications and options implicated in the existence of latent, asymptomatic forms of plague that might remain unseen for long periods, and then might re-emerge in the same or different locations. The paper considers why the idea of ‘ambulatory plague’ did not disappear despite the lack of evidence for it, and this was not simply because absence of evidence was not evidence of absence. There is a powerful parallel (a potentially paradigmatic one) as the current scientific community grapples with Ebola and its cryptic origins. As the West African epidemic unfolded, it has become clear that Ebola does, indeed, take on an ambulatory form, with

similar biopolitical implications for surveillance, especially of survivors. Ebola virus has been found to endure in the semen and perhaps other body fluids in five percent of survivors so far up to eighteen months after their initial infection, and such epidemic flare ups as there have been can be traced to such survivors and perhaps to resurgent illness episodes.<sup>10</sup> On three separate occasions in central Africa the virus has returned to the same locations after a period of eighteen months. So while there is a powerful paradigm maintained within the small community of researchers involved in discerning Ebola's reservoir that it 'spilled over' from the natural world, probably from bats, it becomes increasingly plausible that it was a human survivor of an earlier epidemic who brought the disease to patient zero's Guinean village of Meliandou. This is certainly the view of many villagers there, who identify the origin of the outbreak with an ill woman who had sought out one of their healers, who stayed with (and slept alongside) the mother of patient zero while she was there, and who had longstanding links with diamond traders in Sierra Leone, and via them, presumably, to Central Africa. While the idea of 'ambulatory plague' was eventually dismissed, Lynteris's paper draws out the ever-present specter of ambulatory forms. He explores how uncertainties in medicine and epidemiology play into disease management as practiced—in which false certainties are socially maintained.

These detailed empirical inquiries into the manifestations of specific epidemics command the need for more systematic comparative analysis. Such an agenda is developed, and the power of it demonstrated, in Samuel Cohn's tour de force that compares the social fallout of a plethora of cholera and plague epidemics. It is wholly enlightening to those who, like myself, were drawn to the Ebola crisis and the violence that accompanied it, from an understanding of the region. We did not appreciate the range of precedents in other epidemics. Cohn observes, first and curiously, that only certain disease epidemics seem to spur hatred—historically, cholera and smallpox, but not equally devastating epidemics of typhus, plague, or influenza. Questions thus arise concerning the agency of specific diseases and how experience of their specific symptoms, spread, and legacy in corpses and survivors might alter social response. Not all diseases divide society either, and in Cohn's magisterial sweep of the literature, we appreciate how the targets of riots (and thus their cause and meaning) differ. Some riots target epidemic victims, while others laud them, and target those attempting to govern the epidemic. This analysis undermines easy generalizations linking epidemics

to violence, and draws attention, instead to the variety of mistakes that get made when endeavoring to bring epidemics under control as they play into complex experiences of class, caste, colony and so on. Cohn has already developed a comparison of cholera riots with those relating to Ebola that encourages other productive comparative work to be done, such as asking why the violence leveled against humanitarian workers in Guinea was more pronounced during the Ebola epidemic than across the border in Sierra Leone or Liberia?<sup>11</sup> And as Cohn suggests, politicized interpretations of epidemics emerge from much more longstanding discourses linking political experience to health and the body; to questions of organ stealing and blood stealing.<sup>12</sup>

The empirical cases concerning social dimensions to high mortality epidemics that are documented in this volume provide inspiration and hypotheses for further comparative analysis. Global and national health organizations have neglected the value of this work. Half-remembered popular TV documentaries, Hollywood blockbusters, and works of literature suggest its significance, but, as these chapters reveal, the stereotypes that they purvey can be as lethal as the diseases themselves.

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# Erratum to: Histories of Post-Mortem Contagion

*Christos Lynteris and Nicholas H. A. Evans*

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E1

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