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**Morbid Sensations: Intimacy, Coercion, And Epidemic Disease In Philadelphia, 1793-1854**

Timothy Kent Holliday  
*University of Pennsylvania*

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Abstract
This project refigures the histories of yellow fever, cholera, and typhus through the rubric of intimacy, defined as a value-neutral condition of physical and sensory proximity that can acquire a positive or negative valence based on context. It considers how disease-specific symptoms, epidemiological theories, and treatments of disease have material and intimate impacts on the cultures and societies that survive. Intimate care practices catalyzed knowledge production, feeding into nosological theories of disease, but they also changed the ways that people understood the body, and themselves as patients and physicians. Philadelphia’s historic epidemics catalyzed the development of a clinical brand of intimate information gathering that blurred the lines between what historians have traditionally viewed as distinctly medical and distinctly carceral institutions. Twenty-first-century compliance with doctors’ orders was built on the shaky foundation of coerced acquiescence, much of which took place during nineteenth-century disease epidemics in institutions like Philadelphia’s Lazaretto, and its almshouses, hospitals, and prisons. Institutional physicians bolstered professional credibility through the performance of intimate care. Understanding the embodied experience of disease is especially important for historians of medicine. Paying careful attention to archival mentions of embodied experiences—pain, pleasure, smell, touch, disgust—allows for a more thorough understanding of the lived experiences of historical actors. This research highlights the interconnectedness of epidemic diseases with each other and the professional identity of physicians, as well as the closely intertwined relationship between physical and moral health—and between personal and communal health—in the late-eighteenth- and early-nineteenth-century medical imagination.

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MORBID SENSATIONS: INTIMACY, COERCION, AND EPIDEMIC DISEASE IN
PHILADELPHIA, 1793-1854

Timothy Kent Holliday

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MORBID SENSATIONS: INTIMACY, COERCION, AND EPIDEMIC DISEASE IN
PHILADELPHIA, 1793-1854

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Timothy Kent Holliday
For Samantha and Rich

For my parents and grandparents

And for Cary
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ABSTRACT

MORBID SENSATIONS: INTIMACY, COERCION, AND EPIDEMIC DISEASE IN
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Timothy Kent Holliday
Kathleen M. Brown

This project refigures the histories of yellow fever, cholera, and typhus through the rubric of intimacy, defined as a value-neutral condition of physical and sensory proximity that can acquire a positive or negative valence based on context. It considers how disease-specific symptoms, epidemiological theories, and treatments of disease have material and intimate impacts on the cultures and societies that survive. Intimate care practices catalyzed knowledge production, feeding into nosological theories of disease, but they also changed the ways that people understood the body, and themselves as patients and physicians. Philadelphia’s historic epidemics catalyzed the development of a clinical brand of intimate information gathering that blurred the lines between what historians have traditionally viewed as distinctly medical and distinctly carceral institutions. Twenty-first-century compliance with doctors’ orders was built on the shaky foundation of coerced acquiescence, much of which took place during nineteenth-century disease epidemics in institutions like Philadelphia’s Lazaretto, and its almshouses, hospitals, and prisons. Institutional physicians bolstered professional credibility through the performance of intimate care. Understanding the embodied experience of disease is especially important for historians of medicine. Paying careful attention to archival mentions of embodied experiences—pain, pleasure, smell, touch, disgust—allows for a
more thorough understanding of the lived experiences of historical actors. This research highlights the interconnectedness of epidemic diseases with each other and the professional identity of physicians, as well as the closely intertwined relationship between physical and moral health—and between personal and communal health—in the late-eighteenth- and early-nineteenth-century medical imagination.
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PROLOGUE

“A Sacrifice to the Distemper”:

Philadelphia, 1762

Leadbetter was dead: to begin with. Or so John Redman recalled; there was some
doubt about that. But in any case, the small alley near the corner of Front and Pine Streets
where the Leadbetter family made their home was a sickly place, comprising poorly
ventilated tenement houses arranged around a court. It was little wonder, Redman
thought, that the disease had first appeared there, in a sailor recently arrived from
Havana, “brought privately after night, before the vessel had come up to town,” as
Redman remembered.¹

The Leadbetter family died, if Redman’s memory served correctly, during
Philadelphia’s yellow fever epidemic of 1762—in August, to be exact, or possibly early
September. The aging Dr. Redman no longer had all of his notes from that year, and, his
“memory being much impaired by age and infirmities,” he relied on “an ancient woman,”
among others, to help him get his facts straight. Presumably the family “fell a sacrifice to
the distemper” at home, perhaps under Redman’s care, perhaps not. In any case, if they
received treatment from a doctor at all, it would have consisted of a variety of orally
administered medicines including Glauber’s salt, a laxative used in this case to promote

¹ John Redman, An Account of the Yellow Fever as It Prevailed in Philadelphia in the
Autumn of 1762; a Paper Presented to the College of Physicians of Philadelphia at Its
the discharge of bilious matter. Snakeroot decoctions, with or without antiemetic powders, were another of Redman’s favorite remedies.2

But these treatments rarely sufficed on their own: “with most the recovery was slow and tedious,” Redman recollected, “and often needed the addition of chalybeates, with bitters and country air, before a perfect and complete restoration of all the natural functions could be obtained, especially in the weaker sex.”3 But most Philadelphians—including, in all likelihood, the Leadbetter family—could hardly hope to find refuge in the countryside, especially during a frightful epidemic such as yellow fever. A person in need of medical treatment might have sought it at the Pennsylvania Hospital. Founded in 1751 and receiving its first patients the following year, the Pennsylvania Hospital served Philadelphians who could not afford other forms of care. Some eighty years after the institution’s founding, William Gunn Malin—a British immigrant who served as the Hospital’s clerk—would describe the Hospital’s situation: “The square on which the Hospital stands, is bounded by Spruce and Pine, and Delaware Eighth and Ninth streets. It measures four and a quarter acres. With the exception of about one hundred and fifty feet on Pine Street, furnished with an iron railing, which affords a view of the south front of the building, the whole lot is enclosed by a brick wall.” Airy cupolas topped each of the hospital’s wings, which were “finished so as to present respectable fronts on Eighth and Ninth streets to the east and west.”4

2 Ibid., 9, 13, 17-18.
3 Ibid., 25.
But in 1762, the Hospital was somewhat more modest. Small hospitals were de rigueur in the age of miasmatism, when common wisdom held that too great of a concentration of sick people would necessarily prove disastrous. In the early decades of Pennsylvania Hospital its inmates were perfectly visible, exposed to the jeers of

passersby.6 And yet, Pennsylvania Hospital’s modest and “respectable fronts” were crucial to its public image as a charitable institution, as well as to its patients’ successful moral reform. But reforming morals went hand in hand with reforming bodies. A healthy body produced healthy morals, and vice versa; reformers did not see the two categories as distinct.7

Other institutions allegedly contributed to this project of simultaneous moral and health reform, including jails and prisons. But in 1762, the state of Philadelphia’s penal institutions hardly satisfied reformers. The jail at Third and High Streets, for example, was the very picture of vice. The abolitionist jurist Roberts Vaux would later write that, prior to the 1780s “in one common herd were kept, by day and night, prisoners of all ages, colours, and sexes!” Worse still, Vaux reported, “it was said to be a common practice for the women to procure themselves to be arrested for fictitious debts, in order to gain admission among the men”—all the more reason to carefully police sex segregation.8


7 Stevenson 1502.

8 Roberts Vaux, *Notices of the Original, and Successive Efforts, to Improve the Discipline of the Prison at Philadelphia, and to Reform the Criminal Code of Pennsylvania: With a Few Observations on the Penitentiary System* (Philadelphia, Pa.: Kimber and Sharpless, 1826), 13, 27, 31. In the minds of penal reformers, the rehabilitation of criminals worked through the control sexual desire and the channeling of vicious energy toward virtuous ends. This could only work if prison sentences were sufficiently long. The first step in this project was to segregate prisoners by sex; the second, to implement solitary confinement. Overcrowding posed a problem, though, making it increasingly difficult to prevent opposite-sex and same-sex sexual activity, and not even solitary confinement could eradicate masturbation—at least, not without the proper physical restraints—or sexual fantasizing. See Mark E. Kann, “Sexual Desire, Crime, and Punishment in the Early Republic,” in *Long Before Stonewall: Histories of Same-Sex Sexuality in Early America*, ed. Thomas A. Foster (New York, N.Y.: New York University Press, 2007),
In the eighteenth century, almshouses were similarly fraught institutions. The Philadelphia City Almshouse was established in 1732, located on land bounded on the east by Third Street, on the west by Fourth Street, on the north by Spruce Street, and on the south by Pine Street. In 1767, just a few years after the Leadbetter’s deaths, as the proportion of poor Philadelphians grew, the institution was moved seven blocks west and 279, 296. This dilemma helps explain why prison officials so jealously guarded institutional bylaws proscribing interactions between convicts. One of the other primary risks of gregarious confinement was that it facilitated cross-contamination of petty criminals by more hardened offenders, hence the need to sequester convicts through solitary confinement. Among those who espoused this view was William Darlington, a future congressman who, as a medical student at the University of Pennsylvania, penned *A Dissertation on the Mutual Influence of Habits and Disease* in 1804. With a nod to the public health benefits of stanching the circulation of vicious habits, Darlington medicalized vice as “a morbid excitement, or operation of the mind, or brain, which tends to injurious consequences in society.” He explained that “[a]s disease is a habit of wrong action, so I would reverse it, and say that all habits of injurious tendency are diseases; and of course require medical treatment.” According to Darlington, “[r]eligious impressions exert great influence upon the immoral form of disease.” See William Darlington, *A Dissertation on the Mutual Influence of Habits and Disease* (Philadelphia, Pa.: Joseph Bakestraw, 1804), 15, 22, 31. It was the purpose of carceral institutions—especially penitentiaries—to address these diseases, curing them by means of encouraging penitence through solitary confinement. Darlington fervently applauded Walnut Street Prison—an institution sometimes referred to as “Pennsylvania’s first penitentiary”—for its implementation in 1790 of confinement of its prisoners in solitary cells: “This valuable institution is in reality an hospital for diseased morals,” and solitary confinement its trademark panacea, for “no treatment has ever been found to produce a state of mind so favorable for the introduction of a new and healthy excitement.” See Darlington 30. See also LeRoy B. DePuy, “The Walnut Street Prison: Pennsylvania’s First Penitentiary,” *Pennsylvania History: A Journal of Mid-Atlantic Studies* 18, no. 2 (April 1951): 130-144. Importantly, sociologist Ashley Rubin disagrees with the primacy so often given to Walnut Street Prison, identifying it as the third state prison in the country rather than the first. See Ashley T. Rubin, “Early US Prison History Beyond Rothman: Revisiting *The Discovery of the Asylum*,” *Annual Review of Law and Social Science* 15, no. 1 (2019): 142. This “new and healthy excitement,” Darlington argued, had positive and tangible bodily ramifications; new excitements—new stimuli—encouraged, if not demanded, new (and healthier) actions, in turn curbing the tendency toward vice and erasing its physical and mental signatures. See Darlington 7, 30.
renamed the Philadelphia Almshouse and House of Employment. This change of location reflected a trend in the mid-to-late eighteenth century toward the compartmentalization and segregation of the poor on the part of wealthier reformers. By moving the poor somewhat farther away from the city’s center, the Almshouse worked simultaneously to keep the poor segregated from their wealthier neighbors and inculcate them into a burgeoning middle-class ethos. By 1768, the city’s Overseers of the Poor were keenly aware of a growing trend away from “out relief” toward institutionalization. In theory, the Almshouse served as a helpful resource for the impoverished, providing “custodial care,” especially for the elderly and the chronically

9 In 1765, the number of poor Philadelphians was 16.0 per thousand. Between 1768 and 1771, the ratio had risen dramatically to 28.1 per thousand, and continued to rise to 30.3 per thousand between 1772 and 1775. See Gary B. Nash, “Poverty and Poor Relief in Pre-Revolutionary Philadelphia,” The William and Mary Quarterly 33, no. 1 (Jan. 1976): 9.

10 Historian John K. Alexander explained that, in the last half of the eighteenth century, wealthy and middle-class Americans “wanted to check what they perceived as the increasingly dangerous poor by training or forcing them to accept their station in life deferentially.” See John K. Alexander, Render Them Submissive: Responses to Poverty in Philadelphia, 1760-1800 (Amherst, Mass.: The University of Massachusetts Press, 1980), 160.

11 Karin Wulf has noted that the promise of labor partially offset the Overseers’ concerns: “Under the new system [of institutionalization], the overseers had little choice but to send pregnant and abandoned women to the Bettering House, where they would be confined and compelled to work (if capable) until able to provide for themselves and their dependents. A probable scenario involved the forced indenture of their children as apprentices.” Even so, “[a]lthough out relief was predominantly awarded to women, institutions accommodated men and women in more equal numbers,” indicative of the hesitance of institutions to institutionalize certain women. See Karin Wulf, “Gender and the Political Economy of Poor Relief in Colonial Philadelphia,” in Down and Out in Early America, ed. Billy G. Smith (University Park, Pa.: Pennsylvania State University Press, 2004), 163, 169.
ill.12 The Leadbetters, acutely ill as they were—and with an “infectious” disease, no less—would not have been welcome.13

Within hospitals, prisons, and almshouses alike, eighteenth-century inmates could receive various forms of care. Western medical practitioners of the time were caught between a cautious valuing of innovation on the one hand, and tenacious ties to humoralism on the other.14 Earlier in the century, the Dutch chemist and “founder of clinical teaching” Herman Boerhaave (1668-1738) had concluded, using research methods that grew out of seventeenth-century mechanistic doctrine, that while a particular treatment might prove effective in one disease, it might not work—or worse, might be deleterious—for another disease, or even other cases of the same disease when

13 Ordinances, Rules, and Bye-Laws for the Alms-House and House of Employment 5-6.
The care that inmates at Philadelphia’s institutions received in the eighteenth century, though still limited by the organizational codes of the institutions themselves, was based upon these new mechanistic principles, as well as a reaction against certain ideas among them. However the Leadbetters experienced sickness and death, physicians did not use the family’s bodies to produce new medical knowledge. Had the family died in an institution several decades later, it would have been a different story. The stories of the Leadbetters’ nineteenth-century counterparts and the physicians who treated them, as well as the corresponding protocols of intimate care those physicians employed, illustrate


16 Arguably among the most important remedies of the time was quinine, or Peruvian bark. Over the course of the eighteenth century, Peruvian bark evolved in the minds of physicians from an inexplicable specific to an easily apprehensible tonic. See Dale C. Smith, “Quinine and Fever: The Development of the Effective Dosage,” Journal of the History of Medicine and Allied Sciences 31, no. 3 (Jul 1976): 346.
how nineteenth-century clinical medicine was built on the intimate care performed by institutional physicians on institutionalized patients.
INTRODUCTION

“Pains Are More Numerous Than Pleasures”

This dissertation investigates intersections between epidemic disease, medical practices, and carceral culture in Philadelphia and its suburbs from 1793 to 1854. In it, I argue that physicians employed intimate care strategically, using it to construct and bolster professional authority that—however contested and aspirational—granted physicians ever more privileged access to the bodies of patients. I define intimacy as a value-neutral condition of physical and sensory proximity that can acquire a positive or negative valence based on context. I refigure the history of three diseases—yellow fever, cholera, and typhus—through the rubric of intimacy, and consider how disease-specific symptoms, epidemiological theories, and treatments of disease have material and intimate impacts on the cultures and societies that survive. Epidemic disease crises proved to be professional crises, as diseases like cholera threatened to undermine physician authority over patients by casting doubt on physicians’ credibility as effective healers. In response, physicians of the 1830s framed physician-patient intimacy as clinical in nature, in the process confronting lay and professional understandings of contagion, disease, intimacy, and ethics. Philadelphia’s historical epidemics catalyzed the development of a clinical brand of intimate information gathering that blurred the lines between what historians have traditionally viewed as distinctly medical and distinctly carceral institutions.

Epidemic disease outbreaks worked against the struggles of eighteenth- and nineteenth-century middle-class Americans to make bodily functions, and bodies in
general, private, especially when the treatment of the disease in question relied on intimate care. In the management of epidemic diseases, intimacy manifested in care practices that required or hinged upon both physical proximity and sensory proximity—not just sight and hearing, but also touch, smell, or taste. Intimate care practices catalyzed knowledge production, feeding into nosological theories of disease. By nosological, I mean relating to the classification of diseases and quests to understand specific diseases as distinct from one another. But intimate care practices also changed the ways that people understood the body, and themselves as patients and physicians. Some examples of intimate care practices included massaging or rubbing affected body parts, bathing patients, and even tasting the patient’s vomit to better understand their ailment. Depleting therapies and intimate care were by no means mutually exclusive. On the contrary, bloodletting, purgatives, emetics, and sudorifics involved intimate exposure to the bodily fluids of the sick and dying. When discussing experiences of intimate care, an approach informed by history of the body is crucial. Ignoring the body as a category of analysis risks falsely naturalizing what it means, and meant, to have a body. Because of the

17 See Ed Cohen, “A Body Worth Having? Or, A System of Natural Governance,” *Theory, Culture & Society* 25, no. 3 (May 2008): 103-129. Cohen argued that, “[s]trictly speaking, ‘the body’ does not naturally exist. Or, to put it more affirmatively: ‘the body’ only exists within a political ontology that distinguishes the human organism both from its life-world and from ‘the person’ to whom ‘it’ supposedly belongs. Within this ontological frame, human personhood appears as a subsequent, or even consequent, relation to a self-defining (and ‘self’ defining) form of living matter which ‘the body’ then names as its proper reference. Only our bio-politics, and not ‘our nature’, makes ‘the body’ seem natural to us.” See Cohen 119. Kathleen M. Brown has explained that, “although it is saturated in culture, the body is also subject to the dictates of its own logic: that of a physical being, vulnerable to sickness and death despite human efforts at intervention and interpretation.” See Kathleen M. Brown, *Foul Bodies: Cleanliness in Early America* (New Haven, Conn.: Yale University Press, 2009), 3. For a deeply theorized and historiographical discussion of the usefulness of history of the body
association between bodily fluids and contamination and filth, depleitive therapies
established intimacy between caregiver and patient as well as between caregiver and
disease.

Intimacy in the context of patient-healer relationships has received little attention
from historians of medicine but became central to the work of theorists such as Michel
Foucault, who conceptualized the history of modern medicine as the rise of the clinic.
Foucault observed that, when early-nineteenth-century French clinician and inventor of
the stethoscope René-Théophile-Hyacinthe Laennec “speaks of alterations of structure, it
is never a question of what is beyond the visible, or even of what would be perceptible to
da delicate touch, but of solutions of continuity, accumulations of liquids, abnormal
increases, or inflammations indicated by the swelling and redness of the tissue”; clinical
medicine’s “birth”—or at least the practices of one of its “founders”—was inextricably
bound up in sensory concerns. And yet, Foucault concluded, “[a]s pathological anatomy
becomes more accurate in situating the seat of the disease, it would seem that the disease
itself withdraws ever more deeply into the intimacy of an inaccessible process.”¹⁸ This
conclusion not only contradicted Foucault’s observations about Laennec, it misread the
significance of intimacy to clinical medicine. For Foucault, intimacy was not about
proximity. On the contrary, as clinical medicine advanced, intimacy retreated.

Historians of nursing and other nursing scholars have produced nuanced analyses
of the politics of intimate care. In the twenty-first century, intimate care forms one of the

cornerstones of the nurse-patient relationship. Performing intimate care is often a source of some trepidation for nursing students. Twenty-first-century nursing educators have contended that “[i]ntimate care is fundamental to nursing, and yet it is an area that remains difficult to teach in terms of addressing student fears, values, and beliefs around nudity and intimate contact with strangers.”19 Contemporary definitions of intimate care are generally restricted to “care that involves sensitive areas,” obviating any reference to sensory proximity or physical proximity more generally. Some nurses have referred to “intimate touch,” alluding to the fact that “nurses may touch patients in ways that would be inappropriate in another context—touching a breast when auscultating an apical pulse or the genitalia when inserting an indwelling catheter,” but such definitions of intimacy are similarly restrictive.20

I explore how practices of intimate care during epidemic disease crises laid a groundwork for the application of such practices toward coercive or disciplinary ends in carceral institutions. Institutions of oppression like knowledge-producing institutions of care and confinement relied upon the bodies of those unable, through disability or other

19 Kerry Reid-Searl and Barbara O’Neill, “Mask-Ed: Breaking the Barrier of Fear of Intimate Care for Nursing Students,” Educational Innovations 56, no. 9 (Sep 2017): 574.

20 Chad O’Lynn and Loretta Krautschield, “‘How Should I Touch You?’: A Qualitative Study of Attitudes on Intimate Touch in Nursing Care,” The American Journal of Nursing 111, no. 3 (Mar 2011): 24. Anthropologist Koreen M. Reece offered a more expansive definition of intimate care in her discussion of care practices for AIDS patients in Botswana: “nursing—or continuous, intimate care—was a primary means through which the family could address the kgang [crisis] of illness and seek to contain it.” In Reece’s estimation, intimate care is almost synonymous with nursing, as both implied prolonged proximity between caregiver and patient. See Koreen M. Reece, “‘We Are Seeing Things’: Recognition, Risk and Reproducing Kinship in Botswana’s Time of AIDS,” Africa 89, no. 1 (Feb 2019): np.
social condition, to resist such institutions. Coercive care has been conceived of as a kind of moral greyscale encompassing scenarios in which caregivers might exercise authority over the treatment or nontreatment of patients, without patients’ consent. However, the physician’s power over his patients was not absolute, even in cases where the power differential between the physician and the patient was at its most profound. Even so, the calculus of consent changed in cases of intimate care, especially in the treatment of highly fatal and incapacitating epidemic diseases, when the patient could not effectively exercise control over the course of their treatment.

My research centers on three related questions. First, how did responses to each successive epidemic draw upon experiences with previous epidemics? Second, how did patients and physicians experience intimate care in institutions during Philadelphia’s disease epidemics? Third, how did intimate care catalyze medical knowledge production, medical professionalization, and institutional practice? These questions highlight the interconnectedness of epidemic diseases with each other and the professional identity of physicians, as well as the closely intertwined relationship between physical and moral health—and between personal and communal health—in the late-eighteenth- and early-nineteenth-century medical imagination. Physicians of the time, as well as laypersons, saw epidemic diseases as intimately connected to environmental, personal, and moral factors, rather than as isolated outbreaks. Institutional intimacy undergirded the medical professionalization process, laying the groundwork for the maturation of the clinic.


Physicians of the time period covered by this project often used the term “morbid sensations” when describing pain or other symptoms of diseases. Samuel Jackson explained that “[t]he morbid sensations are not less useful, and are based on considerations not less wise and beneficent, than are the healthy sensations.” Morbid sensations “sound the alarm, and announce the departure of the organs from their physiological or healthy condition.” The concept of morbid sensations is a helpful analogy for understanding the physician-patient relationship during times of epidemic disease crises in the late eighteenth and early nineteenth centuries. Epidemic disease crises, like the morbid sensations of an individual body, “proclaim the presence of the enemy that threatens the ruin of the animal fabric, and constantly importune us to procure the means of relief.”23 Institutional physicians of Jackson’s time relied on intimate care practices to relieve the morbid sensations occasioned by epidemic diseases.

Jackson wrote that “[p]ains are more numerous than pleasures. Many portions of the [animal] structure never acquire a capacity for pleasurable sensation, but there are none that may not become painful.” Pain was, or could be, ubiquitous in the late eighteenth and early nineteenth centuries. Jackson elaborated that “[t]he most insensible parts of the animal structure, when in a state of active inflammation, are endowed with a most acute sensibility and are exquisitely painful.”24 In some ways, it is that exquisite pain which forms a central node of analysis for this project. Understanding the embodied experience of disease is especially important for historians of medicine. Therefore, a

24 Ibid., 176.
second set of questions drives my research. How did patients experience intimacy through their bodies during their illnesses? How did physicians experience intimacy through their bodies while treating sick and dying patients? Paying careful attention to archival mentions of embodied experiences—pain, pleasure, smell, touch, disgust—allows for a more thorough understanding of the lived experiences of historical actors. Asking these questions prompts historians to take the body seriously; answering them helps historians understand how conditions of embodiment and intimacy were and are historically constituted, rather than contextually unbounded entities.

Historians of medicine have shown how, while physicians and midwives relied upon many of the same techniques, the former cultivated professional distance between themselves and their patients as a means of establishing and solidifying status. The relocation of autopsies “from homes to hospitals” in the early nineteenth century left less room for professional midwives.25 But this did not entail the end of male physicians’ employment of the sensorially oriented care typically associated with non-Western and non-professional medicine. Only recently have historians embraced the role of taste, touch, and smell in nineteenth-century American medicine. In Cholera: The Biography, Chris Hamlin argued that “[t]astes and smells were more central in Indian than in European medicine.”26 On the contrary, smell was fundamentally medicalized in the nineteenth-century United States, interpreted as a primary cause of illness. Presentist

biases have clouded historians’ perceptions of odor’s importance. 27 Seventeenth-century scientists had imbued olfaction with powers of detection, and had relied on taste to establish the humoral balance or imbalance of bodily compounds. 28 By the nineteenth century, even anatomists like John Hunter participated in “taste-as-epistemology.” 29 Touch was similarly significant to American professional medicine and formed an integral component of the professionalization project itself; physicians placed physical and sensory contact between themselves and their patients at a premium, in order to better understand bodies. 30

In 1987, historian of medicine Charles Rosenberg issued an “agenda” addressed to historians and nurses, calling for careful attention to the “contingency” of professional nursing and the relationships involved. 31 Historians of nursing have since examined how


28 Evan R. Ragland, “Experimenting with Chemical Bodies: Science, Medicine, and Philosophy in the Long History of Reinier de Graaf’s Experiments on Digestion, from Harvey and Descartes to Claude Bernard,” PhD Diss., Indiana University, 2012, 268. James H. Sweet has demonstrated the significance of connections between taste, smell, and medical epistemology in the Atlantic slave economy: “As part of their inspection [of captives], the Portuguese sometimes ran their tongues across the faces of the enslaved, searching for even the faintest signs of stubble. This practice was not solely for determining age; traders also believed they could discover illness or disease by the taste of the captives’ sweat.” See James H. Sweet, Domingos Álvares, African Healing, and the Intellectual History of the Atlantic World (Chapel Hill, N.C.: The University of North Carolina Press, 2011), 29.


“tension between physicians and nurses” propelled both the professionalization of nursing work and its relegation to subservience. If nursing is an “analytical category,” historians of nursing have argued, it is “one that is deeply embedded in the relationships and social order of clinical practice.” The “healing heritage” of professional nursing in the nineteenth-century United States was deeply allied with “faith communities” like the Sisters of Charity. In this dissertation, female and male nurses, both spiritual and secular, worked alongside—but often under—physicians in the management and care of patients suffering from infectious diseases.

The historiography of public health has influenced my approach to this project. In fact, it was this literature that first drew me to the topic of epidemic diseases. In the vein of Ann Laura Stoler, public health historians have explored concepts of biomedical citizenship and how public health institutions’ control over intimate conduct has been a key instrument of (colonial) power. Historians of public health have repeatedly demonstrated how immigrants and itinerants—especially those of color—have frequently been stigmatized as Patients Zero, a trend exhibited in the epidemics that feature in this dissertation. Drawing on historiographies of institutional reform, especially in the


United States, I examine how intimacy operated in Philadelphia’s carceral and public health institutions.\textsuperscript{36}

Scholars of intimacy have defined intimacy variously as “spatial proximity or adjacent connection,” “simultaneously fusion and separation,” and “tense and tender ties.”\textsuperscript{37} Several scholars have pointed to the ways that intimacy “exposes the entanglement between the public and the private,” referencing “the culturally malleable line between intimacy and the untouchable” and “pungent, violent intimacy,” noting that “intimacy is itself publicly mediated.”\textsuperscript{38} Medical professionalization entailed sustained physical and sensory proximity—intimacy—between physicians and patients, an intimacy intensified through the depletion of bodily fluids. Bringing intimacy into histories of medicine, the body, and institutions troubles the easy partition of public and


private, revealing the incompleteness of the divide for the daily lives of the gravely ill and the incarcerated, their caregivers, and institutional overseers. 39

Between 1793 and 1854, the changing disease environment in Philadelphia propelled the clinicalization of physician-patient intimacy as physicians responded to the increasing demand for intimate care in treating patients of diseases like yellow fever, cholera, and typhus. Physicians strove to reconcile this intimacy with their burgeoning and often precarious professional status. Physicians saw a physician-patient hierarchy as essential to maintaining this status, and sought to cultivate a clinical distance between themselves and their patients, which they saw as distinct from the practices of quacks, midwives, nurses, and attendants, differentiating their own intimate care practices from those of other practitioners by taking extensive notes written in learned language, performing autopsies of their dead patients, and publishing case studies in medical journals. The clinical gaze did not eliminate intimacy; rather, the intimacy that it fostered acquired a complex valence for patients, who experienced intimacy that violated their agency regarding choice of treatment, an important component of pre-nineteenth-century

39 While considering medical practices using the rubric of intimacy is relatively new, scholars have long appreciated the cultural importance of the body. In a 1934 essay, the French sociologist Marcel Mauss outlined what he called “techniques of the body.” Mauss defined techniques of the body as “the ways in which from society to society men [sic] know how to use their bodies.” However, Mauss identified the relevance of his theory to medical practice only in the most offhand way possible: “Lastly there are the techniques of the care of the abnormal: massages, etc. But let us move on.” Physician-patient intimacy was a technique of the body, Mauss acknowledged, but one hardly worth mentioning. Marcel Mauss, Techniques, Technology and Civilisation, ed. and trans. Nathan Schlanger (New York, N.Y.: Durkheim Press/Berghahn Books, 2006), 78, 91.
Western medicine, discussed by historian of British medicine Mary Fissell, that remained significant in early-nineteenth-century American medicine.\(^40\)

Therapeutic regimes were not merely responses to the presentation of morbid sensations; they also played a part in how diseases were defined. The kinds of intimate care that physicians employed during yellow fever epidemics helped physicians define yellow fever as noncontagious. Later, the intimate therapeutics of cholera catalyzed a general professional interest in the morbid changes of the gastrointestinal tract, which in turn allowed physicians to discover the difference between typhus and typhoid, and clearly define typhus as its own disease, distinct from yellow fever. Intimate care regimes also shaped how patients understood themselves and their role as patients, and how physicians understood their identity as physicians. This process had profound implications for how patients—not to mention physicians—experienced treatment. By the 1840s, physicians could urge patients to acquiesce to the authority of the physician treating them, while also encouraging patients to seek out the best, most reliable physician they could find. Institutionalized and impoverished patients did not have the luxury of free choice in this matter. The intimacy—the physical and sensory proximity—that they experienced at the hands of physicians was fundamentally coercive, even if it had tangible health benefits.

As Roy Porter cautioned, “[i]t would be a hazardous enterprise to expect our records of medical diagnosis to provide us with a reliable, objective, epidemiological

When measuring the impact of an epidemic, perhaps the most important set of questions to ask is: “Who counts and who gets counted?” In other words, who collects data, about whom, and to what ends? These questions, when considered alongside Porter’s warning, serve as a reminder that diseases, like the roles of physician and patient, are historically contingent. Rather than taking these contingencies as given, we should consider how conditions of intimate care influenced patients’ experiences of patienthood at the hands of institutional physicians, but also how such physicians conceived of their patients.

At times certain sections of this dissertation may appear graphic to the point of voyeurism in their discussion of sick, dying, and dead bodies. For this, I apologize, but sanitizing the experience of disease—not to mention the embodied experience of violent intimacy in the name of medical care—does a disservice to reconstructing the lived realities of patients, as well as the experiences of physicians and other caregivers in treating epidemic diseases. Detailed contextual discussions of illness and symptomatic bodies make possible a scholastically deeper—not to mention more richly theorized—appreciation for and understanding of eighteenth- and nineteenth-century embodied experiences of pain, dying, and intimacy.

In the first chapter, I explore political, social, and scientific implications of the cacophony of understandings of disease and the body held by late-eighteenth- and early-nineteenth-century physicians through the case study of yellow fever. Contagionists and

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noncontagionists, of course, held irreconcilable views regarding disease transmission, and consequently they diverged in their ideas about public health. Unsurprisingly, this lack of consensus provided a breeding ground for new and experimental methods of treating yellow fever, which diversity the rise of solidism in the early nineteenth century did not undercut, even as solidism’s doctrinal ascendance left little room for contagionism.

In chapter two, I transition to the 1832 cholera epidemic in Philadelphia. Laypersons and physicians made sense of the new disease—and whether or not it was contagious—by falling back on what they knew about similar diarrheal ailments. Physicians almost unanimously believed cholera to be noncontagious, and thus there was no medical belief foreclosing the possibility of intimate care. Laypersons disagreed, believing the disease extremely contagious, evidence of a growing division between professional physicians and laypersons that manifested in physicians exercising authority over the treatment of their patients. While sometimes patients could resist unwanted treatments, the story of the cholera years was one of patient acquiescence to physician authority, even as the often ineffectual treatments proffered by physicians were suffused with intimacy.

In chapter three, I examine the clinicalization of American medicine in the 1830s and 1840s—the period during which the clinic matured. Cholera had threatened to undermine physician authority. In response, physicians adopted an increasingly clinical gaze, having already quite deliberately sent their students to work with patients in almshouses beginning in the 1820s. Physicians categorized diseases, anatomical structures, and entire bodies with increasing specificity, cataloguing the morbid sensations and changes typical of each disease. Doing so was their way of better
understanding the human body, individual diseases, and the nature of disease itself, a series of projects driven by institutional physicians like Samuel Jackson, William Horner, and William Gerhard. The work of clinical physicians conclusively differentiated typhus and typhoid through the comparison of morbid anatomical changes in victims’ cadavers.

In the fourth and final chapter, I explore the institutional ramifications of clinicalization. Between the 1830s and 1850s, healthcare spaces simultaneously adopted clinical and carceral organizational elements, pointing to the blurred lines between public health and carceral institutions. Knowing inmates’ bodies was crucial when it came to treating their illnesses, a requisite step on the path towards rehabilitating them as productive members of society.\(^{43}\) For instance, the successful operation of the Philadelphia Almshouse relied upon the labor of its inmates, who received temporary shelter and certain forms of medical care in return. Clinical researchers like William Horner and William Gerhard drew upon Almshouse medical cases for much of their research on diseases like cholera and typhus respectively. Both the Almshouse and Philadelphia’s prisons possessed carceral and public health functions, much like the Lazaretto and Pennsylvania Hospital. Nineteenth-century prisons continued to punish prisoners’ bodies, although Foucault argued that this was not the case. Prisons and almshouses during the period covered by my dissertation witnessed coercive care, a term

\(^{43}\) Gwenda Morgan and Peter Rushton have argued that “the gradual adoption of disciplined incarceration for the sick, the mad, and the deviant … led to systematic bodily inspection and recording for official purposes.” Furthermore, “[a]s the punishments or treatments increasingly involved creating ‘docile bodies’ for the changing of recalcitrant minds, knowing the bodies of the deviants became part of the science of their character and background rather than a precaution against escape.”\(^{43}\) See Gwenda Morgan and Peter Rushton, “Visible Bodies: Power, Subordination and Identity in the Eighteenth-Century Atlantic World,” *Journal of Social History* 39, no. 1 (Fall 2005): 54-55.
borrowed from the work of Torbjörn Tännö. For my purposes, “coercive care” refers to care given in a context when the patient is not in a position to consent to treatment, such as cases when the patient is incarcerated.

In the conclusion, I describe the 1849 cholera epidemic, its prelude, and its reverberations. Cholera was in many ways a singular disease, but its impact cannot be fully appreciated without understanding its relationship with other epidemics, like yellow fever and typhus, as well as its institutional ramifications. The cholera generation of the antebellum period was also a typhus generation; although the latter disease rarely appeared in the United States, its clear definition as distinct from typhoid had revolutionary implications for the understandings of disease etiology of the time. In Philadelphia the cholera generation was also a generation defined by the absence of the scourge of yellow fever, so dire a threat to that cohort’s parents and grandparents. Finally, the cholera generation witnessed, participated in, and experienced profound shifts in institutional organization.

This project ends with an epilogue comprising a brief discussion of the project’s social and political ramifications, as well as its theoretical influences. Although many observers identified the late twentieth and early twenty-first centuries as an era of chronic illness, the COVID-19 pandemic in 2020 has forced a revision of that view. Finally, how twenty-first-century chronically ill persons live with disease has much to tell us about how nineteenth-century epidemic patients died from disease. The morbid sensations experienced by chronically ill persons in the twenty-first century provocatively echo those experienced by acutely ill persons in the eighteenth and nineteenth centuries. Then,
as now, clinical institutions required sick, dying, and dead bodies for their successful and continued operation.
CHAPTER ONE

“Elucidated by the Scalpel”:

The Intimate Therapeutics of Yellow Fever, 1793-1829

So named for the jaundice it can produce in its sufferers, yellow fever is a mosquito-borne virus and thus cannot be transmitted directly from person to person. In urban settings like that of early national Philadelphia, it is usually carried by mosquitoes of the *Aedes aegypti* species, which become infected after feeding on a viremic immigrant or traveler returning from an area where the disease is endemic. When introduced to uninfected populations, yellow fever can spread quickly if sufficient numbers of mosquitoes—and human hosts—are present, giving the illusion of contagion. Initial symptoms include fever, vomiting, and general aches and pains. Usually, these symptoms subside within a few days and do not return. In some cases, though, patients experience a sudden and severe resurgence of these symptoms, accompanied by jaundice and internal bleeding.44

44 Rebecca J. Frey, “Mosquito-Borne Disease,” in *The Gale Encyclopedia of Medicine*, vol. 5, ed. Jacqueline L. Longe (Farmington Hills, Mich.: Gale, 2015), 3399. Philadelphian physicians at the turn of the nineteenth century recognized that “yellow fever” was more often than not a misnomer. Alexander May wrote that “the symptom from which it derives its name does not occur oftener, perhaps, than once in twenty cases: here we are liable to be deceived nineteen times in twenty by the name.” See Alexander May, *An Inaugural Dissertation on the Unity of Disease, as Opposed to Nosology* (Philadelphia, Pa.: Way & Groff, 1800), 8.
In Philadelphia at the end of the eighteenth century, the regime of care for yellow fever included bleeding, purging, and the administration of emetics and sudorifics, or medicines that induce sweating—in short, what later commentators scathingly referred to as “heroic” medicine descended from humoral theory. Historians have by and large not recognized the intimate nature of such treatments. Treating a yellow fever patient in the late eighteenth and early nineteenth centuries meant exposure to an assortment of bodily


fluids: blood, sweat, and vomit, among others. While physicians, politicians, and laypersons debated whether the disease was contagious, most agreed that the fluid and gaseous emissions of diseased bodies could be deleterious to one’s health. Even so, physicians recorded the pulses of patients saturated with sweat, made note of odors arising from a patient’s skin and breath, and described the taste of patients’ vomit. These three senses—touch, smell, and taste—drove the dominant methods of treating yellow fever in early Philadelphia.

The multiplicity of understandings about disease and the body in the late eighteenth and early nineteenth centuries had political and social as well as scientific implications. Because contagionists and noncontagionists fundamentally differed in their ideas about disease transmission, they also held conflicting beliefs about public health, including specific issues like racial immunity to yellow fever. Out of this lack of consensus arose a variety of treatments for yellow fever. During Philadelphia’s yellow fever decades physicians increasingly relied on postmortem examinations; physicians celebrated intimate familiarity with patients before and after the patients’ deaths. Even so, the ascendance of solidism—a way of understanding the human body as comprising mechanistic parts—in the final decades of the eighteenth century and the first decades of the nineteenth century did not fundamentally alter the treatment of epidemic diseases like yellow fever. Rather, physicians approached fevers through a combination of Cullenian solidism and Galenic humoralism; indeed, even William Cullen himself articulated quasi-humoral directives.47

47 Christine Hallett has shown that, to Cullen, “[t]he state of the blood was a good indicator of inflammation in the system.” See Christine Hallett, “The Attempt to
However, as more and more physicians began to embrace solidism—whether instead of or in addition to humoral conceptions of the body—support for contagionist doctrines declined. If the principles of vitality inhered in tissues, then bodily effluvia could not spread disease. During the late eighteenth and early nineteenth centuries—Philadelphia’s yellow fever decades—intricate care took any number of forms, from bloodletting to vomit-tasting, according to the aims and ideology of the practitioner. The regimes of intimate care performed by institutional physicians during yellow fever epidemics laid the groundwork for similar regimes employed during different epidemics in subsequent years. Physicians used their intimate observations of living and dead patients to support or revise their understandings of yellow fever and the body, and proposed treatment plans accordingly. Historian John Duffy has shown how, in the late eighteenth and early nineteenth centuries, yellow fever devastated cities up and down the coast of the United States, spurring public health endeavors. He concluded that, “[f]rom the standpoint of American public health, the period from 1793 to 1806 deserves to be known as the yellow fever era.” This is true, but from the standpoint of intimate care, the yellow fever era lasted somewhat longer, at least until the 1820s.


Yellow fever is a staple topic among historians of medicine. Histories of yellow fever often overlap with histories of state sovereignty, public health, and trade. Christopher Hamlin has explicitly connected the North American yellow fever epidemics of the 1790s to “[t]he beginnings of a coherent institutional response” to public health crises.49 Concerns about trade and concerns about yellow fever went hand in hand; securing the health of the economy could jeopardize the health of the community. Trade, after all, could bring with it disease in the form of infected seamen and cargo.50 In describing therapeutic approaches to treating yellow fever, historians have focused primarily on the depletive therapies—vomiting, purging, and especially bleeding—promoted by Benjamin Rush, one of Philadelphia’s preeminent physicians of the late eighteenth and early nineteenth centuries, and his followers. Many scholars have treated Rush as the father of American “heroic medicine,” without critically examining his position in the history of medical traditions.51 Others have questioned the validity of this assumption. By Rush’s time, the concept of heroic medicine had not yet solidified, and Rush himself did not use the term.52 Regardless, Rush’s system of therapy was not a wholesale invention on his part, but stemmed from an emphasis on the importance of

50 See Margaret Humphreys, Yellow Fever and the South (New Brunswick, N.J.: Rutgers University Press, 1992).
52 Sullivan 226. Importantly, however, Sullivan erroneously referred to the “contagion” of yellow fever. (9)
bodily fluids in determining health and sickness. These therapies required intimate contact between attendant and patient, and exposed the attendant to the patient’s bodily fluids—disgusting if nothing else, and dangerous if one believed yellow fever to be either contagious or produced by bodily effluvia.

And yet the bodies of doctors in intimate connection with patients have been conspicuously absent from historical scholarship on yellow fever. Historians have paid a great deal of attention to the politics of collective health, neglecting the role that individual bodies play in that drama. The decentering of bodies has highlighted the importance of disease and health concerns in ordering municipal politics, but it has missed how embodied persons experienced epidemics, and how epidemics influenced lay understandings of the body. Indeed, the cleanliness of individual bodies was of secondary importance to the public health projects espoused by noncontagionists, but considerations of a patient’s body and bodily effluvia were of utmost significance in determining a therapeutic course of action and in justifying one’s understanding of

55 Human bodies are similarly missing from Thomas Apel’s 2016 monograph Feverish Bodies, Enlightened Minds, despite the title. Apel’s book skirted the importance of bodies to both localism and importationism, and to both contagionism and noncontagionism. Of the beliefs of noncontagionists, Apel explained that “dirty bodies” did not produce miasmatic exhalations in the way that dirty environments did. Regimes of personal hygiene functioned as “prophylactic[s],” but disease itself stemmed from “social, not personal, impurities.” In other words, “urban filth” was “the true source of yellow fever.” See Thomas A. Apel, Feverish Bodies, Enlightened Minds: Science and the Yellow Fever Controversy in the Early American Republic (Stanford, Calif.: Stanford University Press, 2016), 110.
yellow fever as contagious or otherwise. In other words, while the ultimate cause of disease lay in the accumulation of urban filth, individual bodies were nevertheless implicated in understandings not only of yellow fever’s etiology, but the methods of treatment appropriate for the disease as well. Did the patient’s body need to be bled? Sweated? Purged? And if so, would exposure to these bodily fluids pose a threat to the attending physician? Could the physician or nurse safely bathe the patient? Did the patient’s black vomit carry disease, or was it merely a symptom? Contagionists and noncontagionists alike asked these and other questions, and answered them according to their respective beliefs.

While 1793 stands out as the most famous outbreak of yellow fever in Philadelphia, it did not mark yellow fever’s first appearance in the city. Philadelphians of a certain age might have remembered the epidemics of 1741 and 1762. But even those who recalled earlier manifestations of the disease recognized that the 1793 epidemic seemed particularly threatening. Importantly, as John Duffy has noted, “an entire generation had grown up with no experience of this deadly disease; hence its sudden and mysterious reappearance in 1793 understandably aroused terror and consternation.”\(^5\)\(^6\) The virulence with which yellow fever struck in 1793 splintered preconceived notions about disease, contagion, and progress. Historian Jan Golinski has pointed out that yellow fever “dealt a severe blow” to assumptions that the American climate could be domesticated and improved by human action.\(^5\)\(^7\) The 1793 epidemic damaged any semblance of


goodwill between Philadelphian physicians, as they debated its cause, origin, and
treatment.58 The epidemic came at a time when Philadelphians and others in the early
Republic were still debating the meanings of citizenship, as well as who could properly
claim to be a citizen.

In short, 1793 was already a volatile time for the nation, even before the fever
made its appearance in Philadelphia that summer. Benjamin Rush first identified the
symptoms of yellow fever on August 19 in the person of Catherine LeMaigre, the wife of
a French importer who lived at No. 77 Water Street. Her pulse was quick and weak, and
her vomit resembled coffee grounds—the black vomit, a definitive sign of yellow fever.
But LeMaigre was not Patient Zero, and “[s]everal persons were swept away before any
great alarm was excited.” A man named Peter Aston had died that day, and in the
preceding days, Rush and other physicians had treated several patients with similar
symptoms, including the young daughter of his colleague Hugh Hodge, who had died a
few days prior.59 By some accounts, it was a much younger physician, Isaac Cathrall,
who first recognized the telltale signs of an epidemic: a cluster of deaths near a boarding
house on North Water Street.60 But Catherine LeMaigre’s illness made it clear to Rush, at

58 Sarah Blank Dine, “Diaries and Doctors: Elizabeth Drinker and Philadelphia Medical
Practice, 1760-1810,” Pennsylvania History: A Journal of Mid-Atlantic Studies 68, no. 4
59 Mathew Carey, A Short Account of the Malignant Fever, Lately Prevalent in
Philadelphia: with a Statement of the Proceedings That Took Place on the Subject in
Different Parts of the United States (Philadelphia, Pa.: Mathew Carey, 1793), 20. See
Benjamin Rush, An Account of the Bilious Remitting Yellow Fever, as It Appeared in the
City of Philadelphia, in the Year 1793 (Edinburgh, U.K.: John Moir, 1796), 18; J. H.
Powell, Bring Out Your Dead: The Great Plague of Yellow Fever in Philadelphia in 1793
60 Powell 41.
least, that these were no mere cases of standard summer fevers: after an absence of more than three decades, yellow fever had returned to Philadelphia.

The epidemic brought public life in the city to a screeching halt. Samuel Stearns, a lawyer and sometime poetaster from Providence, lamented the sad state of affairs in Philadelphia in a collection of doggerel verses titled *An Account of the Terrible Effects of the Pestilential Infection in the City of Philadelphia*. Capturing the level of fear pervading Philadelphia at the time, Stearns exclaimed: “The air corrupt, made people then believe / ‘Twas dang’rous for them in the same to breathe!” Stearns undertook the commendable task of summarizing the contagion debate in iambic pentameter, describing the disease—which he never referred to as yellow fever—as:

… an infection, which some people say
From distant lands, somehow, has found the way:
But some with boldness do this thing deny,
And say the venom from the earth did fly:
From filth expanded by Sol’s burning heat,
Or fumes proceeding from a dirty street;
Thus generated, did infect the air
With putrid exhalations ev’ry where,
Within the limits of the city’s bound;


The people, pent as in a lonesome den,
Sell not their goods unto their countrymen;
The vessels too lay loaded by the shore,
For want of hands the num’rous goods to store;
The sweeping illness, by its rapid sail,
Did cause the markets in the town to fail!
For in the city ev’ry one did know,
The country people were afraid to go,
Lest the contagion they might thus convey,
Lose their own lives and fill men with dismay!
Stearns captured the broad-stroke dogmata of both importationism and localism. According to importationists, yellow fever was borne to American shores by foreign vessels carrying rotting goods and unsavory immigrants. Importationists generally believed yellow fever to be contagious, and favored public health measures that approached the disease as such. On the other hand, localists—who were usually also devout noncontagionists—pointed to indigenous sources like marshborne effluvia, unwholesome living conditions, or climatic variations as the causes of yellow fever epidemics.

Stearns’s versification also illustrated the dominance of importationist discourse in 1793: it took “boldness” to deviate from importationism and declare a belief in yellow fever’s local origin. Because of its association with trade, yellow fever was a highly politicized disease, and the arguments surrounding its origin equally polarizing. By 1793, a solid majority of the members of the College of Physicians supported the doctrine of importation, though figures like Southern-born physician and future proponent of scientific racism Charles Caldwell disagreed. That year the College informed Governor Mifflin that “[n]o instance has ever occurred, of the disease called the Yellow Fever, being generated in this city, or in any other part of this state, as far as we know; but there

62 Ibid., 1
have been frequent instances of its having been imported, not only into this, but into other parts of North America.” 64

This was the guiding belief behind the public health response to the disease. Heeding the advice of the College of Physicians, the local government established quarantine laws to prevent the importation of yellow fever. On April 22, 1794, for instance, the state legislature passed “An act for establishing an Health-office, for otherwise securing the city and port of Philadelphia from the introduction of pestilential and contagious diseases, and for regulating the importation of German and other passengers.” A reaction to the failure of prior preventative measures taken in protecting Pennsylvania from disease, the law gave new teeth to Philadelphia’s half-century-old lazaretto—“a public hospital or pest-house,” as the law called it—on State Island. The law charged the lazaretto’s resident physician with determining whether a ship was infected or “free from every pestilential or contagious disease (exclusively of the smallpox and measles).” In turn, captains had to answer regarding the health conditions of the port from whence the ship originated, as well as “what persons on board, if any, have been during the voyage, or shall at the time of the examination be, infected with any pestilential or contagious disease.” 65 The penalty for allowing an uncleared vessel to be boarded was $100, as was the fine for a sick person leaving the hospital before their required length of stay had elapsed. Ship captains did not respond favorably to such


stipulations, preferring to take their business to other ports, whether out of fear of contagion due to Philadelphia’s association with yellow fever or out of frustration with cumbersome public health requirements.66

The public health debates surrounding yellow fever affected not just under what conditions patients might receive care, but also the kinds of care that they received—and who administered it. Treating yellow fever patients required caution on the part of the caregiver, especially if the caregiver held contagionist beliefs, but for noncontagionists as well. As a prophylactic measure, for instance, Rush recommended the avoidance of yellow fever’s “exciting causes, such as fatigue, great heat, cold, the night air, costiveness, intemperance, ice creams, and all sudden or violent emotions of mind.” He also urged readers “[t]o take a gentle purge, or emetic, to refrain from business, to bathe the feet in warm water, and to take a sweat upon feeling the first, and even the lightest symptom of indisposition.” To his fellow physicians, he reminded them of the need to vary treatment by climate; the same treatments that worked well in the West Indies would not work in Philadelphia’s climate. Rush termed the class of depletive remedies that he preferred evacuants: “These are bleeding, purges, vomits, sudorifics, and a salivation,” as well as “cold air, cold water and ice.” In addition to climate, physicians had to take “the force of the disease” in consideration, “accomodat[ing]” treatments to suit the severity of the patient’s symptoms.67 In earlier yellow fever epidemics, physicians had relied

66 See Taylor 212-213.

primarily on saline emetics; John Redman recalled that “an early prejudice induced me to prefer the Sal Glaub. Ver.”—that is, Glauber’s salt, or sodium sulfate.\(^68\) Hence, Rush’s emphasis on bleeding seemed innovative in 1793. While Rush acknowledged that sudorifics were useful, achieving a sweat could be difficult, and “compared with the efficacy of blood letting, it is like waiting till a pond of stagnating water near a dwelling house is dissipated in vapor by the heat of the sun, instead of removing it in a few hours by a prompt and copious drain.” Bleeding, on the other hand, “is a prompt remedy,” and “[i]t is suited to the seat and nature of the disease,” since “[t]he yellow fever is always accompanied with inflammation in some part of the body.”\(^69\)

Rush later recalled that “[i]n 1793 bleeding, (in addition to other depleting remedies) was so general, that many thousand people bled themselves, without the advice of a physician.” However, “[i]n 1798 this remedy, in consequence of the weak and unreasonable fears that were excited against it the year before, was but little used, and the cure of the disease was trusted chiefly to gentle purges, mercury, and sweating medicines.”\(^70\) The 1793 and 1798 epidemics were both tremendously deadly, although flight from the city was far more general in 1798 than in 1793.\(^71\) Popular opinion in 1798 still held firm that yellow fever was contagious, discouraging many impoverished Philadelphians from seeking medical attention of any kind, for fear of catching yellow

\(^68\) Redman 26.

\(^69\) Rush, \textit{A Second Address}, 34-35.

\(^70\) Ibid., 39.

\(^71\) Ibid.; DeClue and Smith 245.
fever. Rush chalked up the disease’s high rate of mortality in 1798 to this regression to milder treatment; treating a disease as violent as yellow fever required equally violent cures. Similarly, the young New Jersey-born medical student (and later physician-politician) Lewis Condict remarked that, when doctors in Philadelphia stopped using opiates and quinine to treat yellow fever, and switched to bleeding and purging, the mortality rate of the disease decreased noticeably. However, “[i]t is only in the first stage of these diseases [that is, febrile contagious diseases], that this treatment will be of service. In the last stage, the only remedies which will be found of any advantage, are Tonics and Stimulants.” In other words, Condict’s system of treatment combined depletives with restoratives, while maintaining an aggressive approach to arresting the disease’s progress.

The end goal of Rush’s depletive regime was one of control: to cure the patient meant taking command of the patient’s body by reordering their humors. Rush himself explained that “[a]ll these depleting remedies, whether used separately or together,


74 To do so, some have suggested, had macropolitical implications. In her 1997 essay “Passions and Politics: The Multiple Meanings of Benjamin Rush’s Treatment for Yellow Fever,” Jacquelyn Miller asserted that, to Benjamin Rush, bodies were “political, as well as physical, entities.” Miller connected Rush’s aggressive system of treatment to his efforts at “controlling the passions of the body politic.” See Jacquelyn C. Miller, “Passions and Politics: The Multiple Meanings of Benjamin Rush’s Treatment for Yellow Fever,” in A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic, eds. J. Worth Estes and Billy G. Smith (Canton, Mass.: Science History Publications, 1997), 85, 88.
induce such an artificial debility in the system, as disposes it to vibrate more readily under the impression of the miasmata.” Hence why yellow fever generally seemed to spare women in the West Indies: “Thus the willow rises, after bowing before a blast of wind, while the unyielding oak falls to the ground by its side.” According to Rush’s theory, women’s constitutions were already weaker, and did not need artificial debilitation to the same degree as men. Theoretically, then, those with already weak constitutions—whether due to sex, age, race, or other factors—did not need to be bled as much as “stronger” patients. Additionally complicating the apparent simplicity of therapeutic bloodletting, however, eighteenth-century medical theorists believed “black bodies perspired more effectively and enjoyed immunity to” certain diseases, including yellow fever, according to historian Ikuko Asaka.

Miasma theory was greatly informed by colonial ventures. Historian of medicine Caroline Hannaway has noted that, “[b]y the eighteenth century, … European-trained practitioners travelled with navies, accompanied troops garrisoned in new territories, and set up practice in colonies,” and “[i]n response to these colonial experiences, medical thinking on the environment and disease was modified.” Colonial physicians began to


propose “that changes in nosology were needed to accommodate new disease experiences, but the conviction that elements in the environment were significant in explaining the abundance of disease was in no way undermined.”

Yellow fever was “the most formidable disease of place” in the Americas, as Christopher Hamlin has argued. Many—though by no means all—eighteenth- and nineteenth-century medical physicians theorized Black immunity to yellow fever based on “the black body’s relationship to hot and cold climates,” as historian Christopher Willoughby has demonstrated. Furthermore, yellow fever’s association with miasmatic emanations firmly tied it to the particular locations of such miasmata, and Rush was a strong believer


78 Hamlin, More Than Hot, 211.

79 Christopher D. Willoughby, “‘His Native, Hot Country’: Racial Science and Environment in Antebellum American Medical Thought,” Journal of the History of Medicine and Allied Sciences 72, no. 3 (Jul 2017): 344. Willoughby observed that, “[w]hile [Benjamin] Rush briefly flirted with the idea that people of African descent had an innate immunity to yellow fever during Philadelphia’s epidemic in 1793, he quickly abandoned the position in light of the growing death toll amongst the African American population.” However, Willoughby did suggest that “[e]ven Rush’s brief consideration of innate immunity should serve as a sign that biodeterminist conceptions of race were always close to taking hold of American medicine.” See Willoughby 335. Historian Mariola Espinosa has similarly demonstrated that “[i]t is true that many, perhaps even most, nineteenth-century writers, particularly those in the United States, repeated the story that black people were immune to yellow fever, but many others examined the evidence and came to the opposite conclusion. There was no consensus among well-informed observers on this topic.” See Mariola Espinosa, “The Question of Racial immunity to Yellow Fever in History and Historiography,” Social Science History 38, no. 3-4 (Fall/Winter 2014): 440.
in miasma theory. Historian Conevery Bolton Valencius has shown that “[o]ne of Benjamin Rush’s methods for combating miasmas suggested human operation on the atmosphere parallel to the operation of strong medicines within the body: when confronted with powerful action, oppose it with a force equally strong.” Such was Rush’s approach to treating all manner of diseases—or, as he would put it by 1796, all iterations of a single disease. Medical historian Paul Starr has observed that, “while shunning aristocratic manners, Rush devised a therapeutic system that reflected the same quest for novelty and bondage to tradition that characterized English medical thought.” If there was only one disease, its sole remedy was depletion.

While Starr has argued that Rush’s brand of therapy “dominated American medical practice in the first decades of the nineteenth century,” it had plenty of critics. Some of Rush’s detractors found his adherence to the logic of depletion lacking in sophistication. Londonderry physician William Patterson decried “the evacuating scheme” of Rush and his disciples as both unsound in its science and deleterious in its effects. Rush bled “indiscriminately,” and his “bleeding was unnecessarily copious, and proved often destructive.” Equally destructive was the fact that he could see scores of patients in a single day—Patterson believed that Rush had bitten off more than he could chew. What was more, Patterson found Rush’s professional politics wanting: “the weight

82 Ibid.
of Dr. Rush’s opinions suffers farther diminution, by his departing so much from the principles of liberality, as to refuse consulting with his medical brethren.” Politics suffused debates about yellow fever in the new republic at the time. Federalists, in line with their fears about the contagion of revolutionary radicalism, favored importationist doctrines when it came to yellow fever, while Democratic Republicans—whose base included a substantial number of poor immigrants—favored localism.

Thus, noncontagionism was more than just a medical stance. It had political and economic implications as well. In the early American republican imagination, historian Mark Harrison has shown, “quarantine had also come to be identified with tyranny,” in part because it interrupted free trade. Philadelphia’s anticontagionists and localists—most of whom were Jeffersonian Republicans—held that filthy ships, and more to the point the lazarettos that they tainted, were responsible for epidemics. To Republicans, then, lazarettos were singularly poorly equipped to protect the health of the public. The city’s Republicans perceived Philadelphia’s Lazaretto as a more or less carceral

institution, and one that was disruptive of commerce at that, with the flimsiest of pretensions to being a public health institution.

To Rush, “the prejudices against blood-letting which prevail so generally in our country” were “wholly political.” He explained: “We are descended chiefly from Great Britain, and have been for many years under the influence of English habits upon all subjects.” The British differed, as common wisdom held, in almost every way from the French, and medical practices were no exception. Rush wrote: “do the French physicians advise bleeding in fevers? the English physicians forbid it, in most fevers, and substitute sweating in the room of it.” In other words, Americans’ “prejudices and errors” with regard to blood-letting “are of British origin,” and “have been inculcated upon us in British universities, and in British books; and they accord, as illly with our climate, and state of society, as the Dutch foot stoves did, with the temperate climate of the Cape of Good Hope.” Fortunately, Rush proclaimed, “[o]ur world appears to be upon the eve of a great and universal revolution,” a not unimportant facet of which involved a shift to favorable attitudes toward bloodletting.87

However, opposition to bloodletting came from sources much closer to Rush than Patterson as well. In 1804, while still a medical student at the University of Pennsylvania, Rush’s young student Phineas Jenks—a Federalist at the time, and later a prominent

87 Benjamin Rush, Medical Inquiries and Observations, vol. 4, Containing an Account of the Bilious Remitting and Intermittent Yellow Fever, as It Appeared in Philadelphia in the Year 1794, Together with an Inquiry into the Proximate Cause of Fever; and a Defence of Blood-letting as a Remedy for Certain Diseases (Philadelphia, Pa.: Thomas Dobson, 1796), 251-252, 255-258.
Whig who advocated for propertied Black suffrage—looked forward to a post-bloodletting medical culture:

in the Yellow Fever of the United States, where the temperature of our climate approaches nearly to that of England, in 1665, the lancet is hailed as the ‘Magnum Dei Donum,’ and will be looked upon as such until European refinement, and its concomitant dissipation are more generally admitted amongst us. Then, and not till then, will tonic medicines supersede its use.88

The fact that a student of Rush, even one with Whiggish inclinations, could imagine a future free of bloodletting indicates the degree of pushback against Rush’s system of therapy by 1804. Even so, many physicians employed bloodletting in their treatment of yellow fever, at least to some degree. For instance, the Suriname-born Jewish physician David de Ishak Cohen Nassy, at the time a member of the American Philosophical Society and apparently practicing medicine in Philadelphia, also employed bleeding and many other depletive therapies, but more conservatively than Rush: “None of my patients were bled more than twice, and they lost but 6 or 8 ounces of blood at a time,” and “many recovered without having been bled.” Nassy supplemented depletives with gentler remedies, including “[t]opics of emollient herbs boiled in strong wine, vinegar applied warm on the stomach, the lower part of the belly, and the reins.”89


For his part, the remarkably apolitical importationist Cathrall recommended “brachial venæsection” as a way “to moderate the inflammatory action” of the fever. However, in his experience, bleeding did not help with alleviating other specific symptoms as they arose. Instead, for instance, he used fennel seed infusions to combat costiveness, and opiates to calm restless patients. He also recommended “[w]ashing the whole body in brandy and water, or when that could not be complied with, the face, breast and hands, which always proved refreshing to the sick.” This palliative approach relied upon intimate contact with the patient for its effectiveness—the greater the surface area of the body washed, the better. It is tempting to speculate as to patients’ reactions to such remedies. Affusions and ablutions for medical purposes exposed, for the sake of treatment, parts of the body normally kept private. In domestic settings such nakedness at the hands (literally) of a trusted family physician would have been scandalous in the extreme, in conditions of health. In institutional settings surrounded by an unfamiliar physician and his attendants, it may have been traumatizing, even for the cures it promised. But, however unwillingly, patients acquiesced.

90 Isaac Cathrall, A Medical Sketch of the Synochus Maligna, or Malignant Contagious Fever; As Appeared in the City of Philadelphia: To Which Is Added, Some Account of the Morbid Appearances Observed After Death, on Dissection (Philadelphia, Pa.: Richard Folwell, 1796), 42-43, 59-60, 63.

91 Gwenda Morgan and Peter Rushton have noted that, “[i]n many circumstances, … people are deprived of the right to keep their bodies private. This approach should be no surprise to the more enthusiastic followers of Michel Foucault: it has long been supposed that power and surveillance go together in social relations, and that the bodies and social actions of the relatively powerless are subject to inspection by those in control. Equally, it should be no great revelation to hear that many of those in subordinate positions become accustomed to presenting themselves for that inspection, revealing themselves to the powerful, whether in prisons for strip-searching, in treatment rooms for medical diagnosis, or at the dockside markets for slaves and servants in colonial America.” See Morgan and Rushton 40. Jennifer Evans has observed that “the authors of several medical
Next to Rush’s, Cathrall’s system of treatment might have seemed conservative, even gentle by comparison. Even so, Cathrall denounced his French-American colleagues as insufficiently aggressive in their treatment of yellow fever:

It was the custom of some of the French physicians in this city to wrap the patient’s body in a blanket that had been wrung out of warm vinegar and water in order to induce sweat and a solution of the disease. The former it did sometimes partially effect, but generally with aggravation of almost every other symptom.92

To wrap the patient’s body, of course, likewise required intimate exposure to the sickness as well as to the patient, especially when the end goal was the expulsion of bodily fluids. Such a practice flirted with danger if the disease were communicable, which by this time most physicians—though, importantly, not Cathrall—safely assumed was not the case. Cathrall’s own contagionist bent might have colored his distaste of the French method. Cathrall elaborated that “[i]n addition to this practice they frequently gave a few grains of nitre and camphor in every stage of the disease, but this appeared trifling with the patient at the expense of his life.”93 Such small doses, Cathrall argued, could not help but fail in

and surgical treatises published, re-published and re-printed in the seventeenth and early eighteenth centuries explained that male patients were liable to be obstinate and unruly, unwilling to seek medical advice and unwilling to follow prescriptions. The continued discussion of these behaviours suggests that self-control, predominantly displayed through obedience to the prescriptions of a medical practitioner, remained an important feature of the manliness such texts perpetuated. Acting in an unreasonable and obstinate manner may not always have been the result of a lack of self-control, even if it was interpreted and described as such by medical authors, it may have been a deliberate strategy for asserting dominance over, or reclaiming authority over the body from, the medical practitioner.” See Jennifer Evans, “Patients, Practitioners and Lodgers: Male Sexual Health Patients’ and Their Healers’ Use of Location in Early Modern Medical Encounters,” *Gender & History* 31, no. 1 (Mar 2019): 222.

92 Cathrall 51.

93 Ibid.
curing a disease as serious as yellow fever. To administer them, then, was as irresponsible as it was ineffectual.

Regarding the city’s 1803 epidemic—sometimes identified by historians as typhus rather than yellow fever—University of Pennsylvania medical student William Shaw acknowledged in his doctoral thesis that “[b]lood-letting and mercury were (I assert it upon the authority of our most eminent physicians), both powerful and necessary in former epidemics,” but this was no longer the case. Rather, his education had taught him to prefer gentle cathartics and sudorifics, like spirit of nitrous ether. In addition, “[c]old vinegar and water applied by means of a towel or napkin to the face, breast, and extremities, appeared to give great relief to the patient during the febrile state of the paroxysm. This application assisted the sudorifics in producing their effects, cooled the skin, relieved the difficulty of breathing, and seemed to be an effectual mode of abstracting the preternatural heat from the body.” In the “typhus stage,” he said that “the sinking and debilitated condition of the system required the vigilant attention of the physician, and the watchful care of the nurse. Here, instead of proceeding to reduce the action of the system, it was necessary to support and increase that action, by tonic, stimulating, invigorating remedies,” including blisters, sinapisms, cordials, and the like. Shaw was by no means unusual in his recommendations; on the contrary, his dissertation,

94 William Shaw, A Practical Narrative of the Autumnal Epidemic Fever Which Prevailed in Philadelphia in the Year 1803 (Philadelphia, Pa.: A. & G. Way, 1804), 25. Shaw’s observations would seem to confirm that the disease was yellow fever, as he described patients’ vomit as resembling coffee grounds. (16)

95 Ibid., 29, 34-35.
like so many medical school dissertations of the time, more or less recited the received medical wisdom taught to him by his educators, including Benjamin Rush.96

For his part, Rush recommended that “[v]iolent emotions or passions of the mind” should be avoided as exciting causes of yellow fever.97 However, yellow fever itself could produce anxiety, depression, and distraction. Shaw advised his readers that, “[w]hen the patient complains of anxiety and oppression at the heart; or when his breast heaves in breathing, and he appears disconsolate, assaètida, in the form of tincture, is an excellent restorative to both the body and mind.”98 Likewise, Cathrall recognized in 1796 the importance of taking the patient’s mental state into consideration: “The intellectual faculties at times appeared confused, but seldom a complete delirium. In the intervals of reason the patient was very desponding, and under dreadful apprehensions for the event.” Patients “were very often awaked by frightful dreams, after which they became very watchful.” When the disease reached its “typhus stage” it produced even worse effects on the patient’s mental wellbeing: “The confusion of the intellects increased to a complete delirium, the restlessness became truly distressing, and the patient almost outrageous, and in some cases maniacal.”99 Careful attention to a patient’s mental state was part and

96 For a detailed discussion of Benjamin Rush’s recommended treatments for yellow fever, see Rush, *An Inquiry*, 27-35.
98 Shaw 39.
99 Cathrall 25-26, 29.
parcel of the prolonged physical and sensory proximity between physicians and patients upon which American professional medicine of the time rested.

In addition to the depletive remedies for which he was famous, Rush promoted cold baths, salt baths, “[a]nointing the body with oil,” and especially warm baths, which “serve[d] the treble purposes of keeping the skin clean, and the pores open, and of defending what are called the vital organs from disease, by inviting its remote cause to the external surface of the body.” Bathing was explicitly intimate, relying on both physical and sensory proximity, as it could also render patients less offensive. In 1799, Rush noted that “[t]here is a smell of a peculiar kind emitted by persons in a yellow fever which sometimes produces disagreeable sensations in the attendants, but similar effects are produced from a hundred other smells which do not occasion a fever.” Bleeding, by contrast, “offends no sense, and renders sick people less disagreeable to themselves, and their attendants.” In this way, Rush’s emphasis on bleeding skirted around the unsavory aspects of purging and vomiting—though his therapeutics left plenty of room for recourse to cathartics and emetics as well. His use of emetics did not attract as much opposition as bleeding did, though most other physicians found the use of vomits dangerous when it came to yellow fever, given the tendency of yellow fever patients to vomit on their own anyway. As a practice, purging was relatively uncontroversial, and calomel, Rush’s cathartic of choice, was a widely used and accepted medicine. However,

the doses of cathartics that Rush employed were contentious, and the practice of vomiting
perhaps more so. 103 For instance, Patterson remarked that Rush’s “preparation is of too
drastic a nature, is comparable to arsenic, and is a dose for a horse.” 104

Such disputes did not bode well for yellow fever patients. All of the infighting
among physicians regarding the origin and treatment of yellow fever, William Shaw
argued, was bad for their reputations, not to mention deleterious to citizens. 105 Similarly,
Nassy decried the press for its sensationalism and fearmongering, lamenting that “[t]he
most credulous amongst the people, alarmed by the public papers, and by the numerous
precautions advised to be taken against the pretended pestilence, began to administer
medicines to themselves, and in order to avoid imaginary evils, produced real ones.” 106
Even worse, heated debates between physicians—“always dangerous for suffering
humanity”—compelled prescribers to prioritize politics above nuance, as:

each prescribed according to his own manner, as well for
preserving persons against the contagion, as for treating the
disease, by bleeding, drastic purges, by stimulants, by
diluents, by demulcents, by antiseptics, and by tonics,
without pointing out, in the smallest degree, the
circumstances or particular cases, wherein such medicines
might be employed or rejected. 107

103 Kopperman 543-545.
104 Patterson 55.
105 Shaw 10-11.
106 Nassy 9.
107 Ibid., 7.
It is quite possible that Nassy had Rush specifically in mind when he penned these words. Physicians who, like Rush, bled “indiscriminately” risked their patients’ lives for the sake of proving a point.

In some ways, the inheritor of the contention surrounding Rush’s theories was the controversial anatomist Nathaniel Chapman. A Virginia native and 1801 graduate of the University of Pennsylvania’s medical school, Chapman made a name for himself as an adherent of the doctrine of solidism. Often connected to the theories of Scottish physician William Cullen (under whom Rush had studied) and early French histologist Marie François Xavier Bichat, solidism purported that tissues were the seat of vitality—fluids were merely incidental.108 In this sense, solidism represented a fundamental departure from humoral theory.109 Solidists rejected the notion that restoring a patient’s humoral balance would prove curative. On the contrary, it was the patient’s organs, rather than the humors, that needed addressing. As a result, anatomy ascended to the rank of the most enlightening—and enlightened—of sciences.110 The age of yellow fever in Philadelphia

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109 Literary scholar Hisao Ishizuka has posited that iatromechanics constituted an intermediate stage in anatomical understandings of the body that privileged “fibre”—nerves and membranes—as the source of the principles of vitality. According to Ishizuka, this theory rose to ascendance in the early eighteenth century. See Hisao Ishizuka, “‘Fibre Body’: The Concept of Fibre in Eighteenth-Century Medicine, c. 1700-40,” Medical History 56, no. 4 (2012): 562-584.

110 This emphasis on anatomy meant that dissection became the cornerstone of medical education. See Rachel N. Ponce, “‘They Increase in Beauty and Elegance’: Transforming Cadavers and the Epistemology of Dissection in Early Nineteenth-Century American Medical Education,” Journal of the History of Medicine and Allied Sciences 68, no. 3 (Jul 2013): 331-376.
witnessed a profession in flux (though solidists themselves might have objected to the
term, preferring to think in terms of a membranous rupture): as physicians landed
overwhelmingly on the side of noncontagionism and importationism, they continued to
debate the very nature of the body itself.

Importantly, as long as conceptions of the body emphasized the humors, the body
remained malleable—fluid, in both senses of the word—hence the fervor with which
Chapman and other solidists countered humoralism.111 Chapman referred to “the
peculiarity of vital power,” reminding his readers and students “how much the changes
which the fluids undergo are influenced by impressions made through the intervention of
the solids.” Lest he was not clear enough before, he stated categorically that “[m]y
opinion is, that all changes in the condition of the fluids are wrought by impressions
made through the intervention of the solids.” He appealed to previous studies, alleging
that “[n]ot the slightest proof exists, so far as I know, of their [the fluids] undergoing any
mutations, either by spontaneous action, or from the introduction of foreign matters,
much less that such is the cause of disease, or the mode in which our remedies operate.”
Diseases did not produce morbid changes in the blood, nor did medications act directly
on the blood. The blood was merely a conduit, circulating medications through the body
until they reached the proper solid tissues upon which they acted, allaying the morbid
changes that disease had lately occasioned in those tissues.112

111 See Trudy Eden, “Food, Assimilation, and the Malleability of the Human Body in
Early Virginia,” in A Centre of Wonders: The Body in Early America, eds. Janet Moore
112 N. Chapman, Discourses on the Elements of Therapeutics and Materia Medica, vol. 1
(Philadelphia, Pa.: James Webster, 1817), 28-29, 43.
In the 1820s, Chapman would outline six “laws” of epidemics that he taught his students. The fifth law stated that an epidemic “sometimes attacks people of one colour; sometimes of one sex; sometimes of one particular rank.” The sixth law, however, warned students that “epidemics of the same character hardly ever occur twice in succession,” hence the need for a public health infrastructure put in place to stop new “characters” of epidemics in their tracks.\textsuperscript{113} That public health infrastructure, including Philadelphia’s Lazaretto and its attendant public health laws, largely built by and for white Philadelphians, largely benefited them as well. From 1794 to 1817, the crude death rate (CDR) for white Philadelphians possessed a marked downward trend, reaching a low of 17 in 1817, compared to a Black CDR of 60. On the other hand, the CDR for Black Philadelphians slowly crept up from a mean of 38 in the 1790s, to a mean of 49 in the first decade of the 1800s, and a mean of 53 in the 1810s. By contrast, the mean white CDR for the 1810s was 19, down from 25 in the first decade of the 1800s and 40 in the 1790s.\textsuperscript{114}

However, the CDR for whites was more than double the CDR for African Americans in 1793, prompting many contemporary observers (not to mention later historians) to erroneously assume that people of African descent carried an innate immunity to yellow fever.\textsuperscript{115} Isaac Cathrall recalled that, in the 1793 epidemic, “[b]lacks


\textsuperscript{114} Susan E. Klepp, “Seasoning and Society: Racial Differences in Mortality in Eighteenth-Century Philadelphia,” \textit{The William and Mary Quarterly} 51, no. 3 (Jul. 1994): 504-505. CDR is calculated by figuring the number of deaths per thousand population.

\textsuperscript{115} Ibid., 504. The white CDR was 94; the Black CDR was 43.
of every description, were less liable to it than the white inhabitants; and the negroes
originally from the coast of Africa were scarcely ever affected, although some of those of
our own country fell a sacrifice to it’s [sic] violence.” 116 While many contemporaries
sided with Cathrall, historian Mariola Espinosa has argued that “[t]here was never a
consensus among medical observers that black immunity to yellow fever actually
existed,” and if there was, it was short-lived. 117 In an 1805 publication, Rush remarked
off-handedly that “[t]he field negroes of South-Carolina owe their exemption from
bilious fevers to their living chiefly upon vegetables.” Similarly, “[t]he Bramins, who live
wholly upon vegetables, escape the malignant fevers of India, while whole regiments of
Europeans, who eat animal food, die in their neighbourhood.” 118 In other words, any
resistance to yellow fever that African Americans may have had, Rush explained, was
due not to their race, but to other factors such as diet. 119 Later yellow fever outbreaks in

116 Cathrall 6. While the quotation comes from the beginning of a sentence, I have
modified Cathrall’s capitalization in keeping with his customary use of the lower case
“b” when referencing Black people.

117 Espinosa 437.

118 Rush, An Inquiry, 22.

119 It is worth noting that there is no evidence from the Philadelphia yellow fever
epidemics to support the hypothesis—one still held by some fading elders of the
historical profession—that innate Black immunity to yellow fever ever existed. While
displaying similar symptoms, yellow fever and malaria operate differently. Young
children typically experience mild cases of yellow fever, and acquire immunity if they
survive. On the other hand, malaria “can infect and reinfect a single individual many
times,” with each recurrence successively weaker, meaning that children are most prone
to its ravages. See Espinosa 437, 445.
Philadelphia produced less divergent CDRs, with the notable exception of the 1805 epidemic, in which the Black CDR soared above the white CDR.120

Unsurprisingly, African-American vulnerability to yellow fever did not make much of an impression on white Philadelphians. In 1797, the College of Physicians recommended to the Health Office, regarding the purification of “[t]he bedding, cloathing, and other articles that have been used about the sick” that “[t]hese services should be performed by Africans, under the inspection of persons appointed for the purpose.” Furthermore, “the whole business relating to interments should be performed by native Africans, if possible; if this cannot be done the descendants of Africans who have lately arrived from the West Indies, should be preferred.”121 Consequently, Black Philadelphians performed much of the work of caring for the sick and dying, as well as tending to the bodies of the dead. Such measures thus minimized intimacy between living white Philadelphians and the dead of any race. In his account of the 1793 epidemic, Mathew Carey lamented that “[m]any men of affluent fortunes, who have given employment and sustenance to hundreds every day in the year, have been abandoned to the care of the negro, after their wives, children, friends, clerks, and servants had fled away, and left them to their fate.”122 Like Carey, many white Philadelphians “minimized

120 Klepp 505. In 1795, the white CDR was 38 and the Black CDR was 50; in 1797, 38 and 35; in 1798, 69 and 57; in 1802, 31 and 44; in 1805, 27 and 83.
121 Proceedings of the College of Physicians of Philadelphia 21
122 Carey 31.
black sacrifice” and denigrated the work of Black caregivers, accusing them of both laziness and price-gouging.123

Black leaders hoped that the participation of African Americans in healthcare work during this time of crisis would justify Black citizenship.124 Two particularly prominent Black leaders emerged in Philadelphia during the time of yellow fever: Richard Allen and Absalom Jones. In *A Narrative of the Proceedings of the Black People, During the Late Awful Calamity in Philadelphia, in the Year 1793*, Jones and Allen detailed the efforts of Black Philadelphians to halt the epidemic’s progress and tend to its victims, living and dead. The authors professed themselves “sensibly aggrieved by the censorious epithets of many,” but took special issue with Carey’s account, highlighting the latter’s errors and omissions regarding the participation of Black Philadelphians in the public health response to the epidemic. Jones and Allen, both of whom knew how to perform bloodletting, participated alongside Rush in treating patients. Rush “directed us where to procure medicine duly prepared, with proper direction, how to administer them, and at what stages of the disorder to bleed.” Jones and Allen tabulated both income received and losses sustained by Black Philadelphians,


124 Historian Thomas E. Will explained that “everything seemed up for grabs, especially for African Americans, as the yellow fever descended upon Philadelphia.” See Will 560.
estimating a net loss of £177 9s 8d, not counting “the costs of hearse[s], the maintenance of our families,” and other incidentals.125

The role of Black Philadelphians such as Allen and Jones in treating yellow fever patients threw into sharp relief the racial prejudices held by white Philadelphians. White patients and their families often resented their reliance on Black nurses, or at least questioned the legitimacy of their medical authority, but they begrudgingly accepted treatment, knowing they had no real choice during this citywide emergency. Furthermore, the physical and sensory proximity that bleeding and other treatments required only served to heighten white racial disgust. Being touched by a Black nurse, especially to allow a Black nurse to cut into one’s usually unexposed white flesh, might have been an uncomfortable experience for many white patients, even if the morbid sensations induced by the cut itself would have been understood as part of a routine medical procedure.

White Americans’ racial ideologies of the time emphasized differences between Black and white bodies, censuring certain kinds of interracial intimacy. Vulnerability at the hands of a Black man or woman played into white racial dread and was a horrifying prospect for many whites, even if those hands promised healing.126


126 Historian Richard Newman wrote that “Allen and Jones engaged in blatantly physical contact with ill patients, bleeding them, feeding them, sometimes even restraining them physically. … Treatment might begin by gently touching white bodies to calm or soothe scared patients. If they resisted, however, clutching or grabbing was called for simply to restrain these potential madcaps.” Newman’s visceral language serves as a reminder of the physical and sensory proximity—the intimacy—between caregivers and patients during the yellow fever epidemic. He continued: “Then came what must have been an intense moment, one filled with anxiety, dread, and a number of complex emotions for
In the new nation, the meaning of citizenship had not yet been solidly defined. Jones and Allen used republican language in their arguments for the inclusion of Black Philadelphians among the citizenry, nevertheless asserting a distinctly Black identity.127 Meanwhile, fears and misunderstandings propelled white beliefs about Black immunity. As Rush initially formulated his therapeutic approach to yellow fever, he operated under the belief that the disease was contagious. Rush’s understanding of physiology incorporated processes of circulation and sympathy—that is, stimulus and response.128 Through the help of the circulatory system, the rest of the body was exposed to a variety of stimuli, some harmful, to which the sympathetic systems responded. This process applied both to individual bodies and to collections of bodies, hence contagion and importation. But Rush finally settled on assigning a noncontagious nature to yellow fever, tracing the 1793 epidemic to “the putrid exhalations” of “damaged coffee” from the West Indies.129 In other words, his experiences in 1793 led him to question the disease’s

black nurses as well as white patients: the bleeding procedure itself. Imagine Richard Allen sitting beside a deathly ill white man or woman, close enough for both parties to smell each other’s breath, look deep into each other’s eyes, and sense fear.” Newman may have been projecting twenty-first-century sensibilities onto eighteenth-century actions—bloodletting was routine, hardly a terrifying or profound experience. But interracial intimacy, in this case in a medical context, was. See Richard S. Newman, *Freedom’s Prophet: Bishop Richard Allen, the AME Church, and the Black Founding Fathers* (New York, N.Y.: New York University Press, 2008), 91. For more on the concept of racial disgust and interracial intimacy, see Jennifer L. Morgan, *Laboring Women: Reproduction and Gender in New World Slavery* (Philadelphia, Pa.: University of Pennsylvania Press, 2004), 14-16; Mimi Sheller, *Citizenship from Below: Erotic Agency and Caribbean Freedom* (Durham, N.C.: Duke University Press, 2012), 224-226.

127 Will 567.
transmissibility, and he, “supported by a few other physicians, boldly declared it to have originated from local and domestic causes,” and thus that it was not transmissible by properties of contagion. By 1794 Rush had resigned from the College of Physicians over disagreements with the College’s professed opinion on yellow fever’s contagious nature, signaling the official recantation of Rush’s earlier belief in the disease’s contagion.

According to Rush, one of the premonitory symptoms of yellow fever was “a hot and offensive breath.” Rush referenced a couple of cases of this breath causing nausea in those in close proximity to the patient, but never the fever itself. Rush still admitted that, in some cases, yellow fever appeared contagious, especially when the patient was “attended in a small, filthy, and close room,” and in instances of “[a] person sleeping in the sheets, or upon a bed impregnated with the sweats or other excretions, or being exposed to the smell of the foul linen, or other clothing of persons who had the yellow fever.” However, such situations were only examples of “putrid animal matters” producing noxious exhalations, not true contagion. To be truly contagious, a disease had to be transmissible from one person to another, not merely productive of a different character of sickness.

Isaac Cathrall believed yellow fever to be “infinitely more contagious in the latter stages than in the early period.” He argued that “coming in contact with the patient’s

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body … was the most certain way of receiving it.” Cathrall’s statement would seem to be an admission of solidistic sympathies. This rule extended, however, to bodily fluids. For instance, Cathrall recalled:

I knew a nurse, who I am almost certain received the infection from a patient, during the operation of an emetic; for the matter thrown up by vomiting emitted a peculiarly fetid smell, which affected her soon after she had carried it out of the room. Early the next day she was attacked with all the symptoms of the disease.

Rush would have explained this scenario as another example of animal effluvia producing sickness in those around yellow fever patients, rather than true contagion. The patient’s vomit emitted noxious effluvia that made the nurse fall ill due to the closeness of the room and the length of her exposure to the patient’s effluvia, with symptoms only resembling those of yellow fever, rather than the disease itself.

Institutions like the Philadelphia Almshouse structured their operational regulations around the assumption that infectious diseases—even if not contagious per se—could still make others ill if they were exposed to patients’ noxious effluvia. According to the rules of the Almshouse as laid out in 1796, “[n]o person shall be admitted into the house, if known to labor under any kind of infectious disease, and if after admission the physician shall declare the person so admitted, to have such a disorder, he or she shall be immediately returned to the overseer, sending such person in.” However, “[w]hen any persons are taken sick, they shall be immediately removed

132 Cathrall 10-11.
133 Ibid., 11.
into the sick ward, that they may have the benefits of nursing and medical assistance.”

Such precautions both guarded against the spread of infectious diseases within the institution, and shielded the Almshouse from the responsibility of caring for the sick poor. Yellow fever’s institutional ramifications were already evident.

On 11 April 1799, the state legislature of Pennsylvania approved the construction of a new lazaretto in the city, as existing public health laws “have been found by experience defective.”

The decision to place the Lazaretto on Tinicum Island stemmed from Philadelphians’ belief that the island was a particularly salubrious location, removed as it was from the closely cramped confines of the city (which contagionists associated with yellow fever) and from both harmful urban filth and harmful marsh effluvia (the sources of disease according to noncontagionists). The 1799 provisional act tasked a newly authorized board of health with planning the construction and management of the Lazaretto. The institution began operations in 1801, funded by the oddly named “City Hospital Tax,” which actually did not benefit the Pennsylvania Hospital. The Lazaretto owed its existence to a general fear of infection held by laypersons and physicians alike, based on prebacteriological understandings of disease etiology. “Infection” signified the ability of sickly air to contaminate certain kinds of imported goods, as well as the ships

134 *Ordinances* 5-7.


136 David S. Barnes, “‘Until Cleansed and Purified’: Landscapes of Health in the Interpermeable World,” *Change Over Time* 6, no. 2 (Fall 2016): 139-140.

that carried them, leading to the introduction of epidemic diseases. Because some products were more likely to rot than others, certain cargos—especially those holding goods like coffee and hides—were subject to greater scrutiny than others. In other words, infection by no means implied contagion.¹³⁸

Figure 2: "Lazaretto, Philada. quarantine station May 11th 56," James Fuller Queen.

Although the debate about the contagiousness of certain diseases raged between contagionist and anticontagionist camps of physicians throughout the late eighteenth century and into the early nineteenth century, debates over the efficacy of the Lazaretto

¹³⁸ See David S. Barnes, “Cargo, ‘Infection,’ and the Logic of Quarantine in the Nineteenth Century,” Bulletin of the History of Medicine 88, no. 1 (Spring 2014): 75-101. Barnes explained that the logic of infection “was based on a loosely articulated but firmly held conviction that foul or contaminated air could be imported from overseas in vessels and goods, and under certain conditions could spark deadly disease outbreaks” (76).
pitted two other factions against each other: importationists, who believed that disease was imported from contaminated vessels, and localists, who held that diseases sprang up from local sources of putrefaction as a result of climatic variables like temperature and humidity. While importationists viewed lazarettos as necessary—even if some of them viewed them as necessary evils—their opponents vehemently denied the need for the quarantine of incoming vessels, including those carrying putrefiable goods.

It is hardly surprising, then, that not everyone agreed with the way the Lazaretto was managed as mandated by law. Charles Caldwell was characteristically unforgiving in his criticism of the 1799 act and the institution it created. Not only was the system of quarantine devised by the act “unnecessarily oppressive and therefore unjust in its influence on commerce,” Caldwell argued, “we would perhaps be unable to find a section of a law more defective in wisdom, and more lame in expedients for the accomplishment of its purposes.” What was more, the state legislature—not to mention the board of health it created—was “totally unacquainted” with the principles of public health. In other words, professional physicians knew better than politicians.139

Caldwell published his concerns in a series of five “entries” under the name “A Philadelphian,” but his distinctive haughtiness shone through his attempted anonymity. He decried the act as “worse than useless”—indeed, “barbarous and inhuman”—for its lack of regard for the well-being of “the healthy part of the crew.” He reminded his readers that “there is a strong probability that fifteen days confinement and idleness on board a vessel, subject to the chills of the night, the fogs of the morning, and the intense

action of the midday sun, will generate disease among the most healthy and robust
seamen,” consistent with Caldwell’s belief in local, climatic causes of disease. And while
sickly members of the crew “are directed to be removed to pure and wholesome
accommodations on shore,” the healthy members, “instead of being indulged in similar
privileges, are to be closely confined to a vessel supposed by the law to be replete with
deadly contagion.” Caldwell agreed that the city needed “[a] well regulated quarantine of
infected vessels, cargoes, and persons,” but with the additional provision of “[a] proper
disposition and treatment of the healthy part of the crews of vessels during their detention
at our Lazaretto.” Caldwell decried the fact that the board of health of Philadelphia,
unlike those of New York and Baltimore, was largely comprised of non-medical
professionals. As a remedy to this situation, he advocated for “incorporating with the
board an equal number of physicians of each sect; of those who believe in the domestic
origin of yellow fever, as well as of those who consider this disease as a foreigner.”
While the former “sect” would have charge of the city’s “internal cleanliness,” the
importationists would “have the principal superintendence of the business of
quarantine.”

140 Ibid., 9-13. Whether or not Caldwell had a point, his argument spoke directly to his
attitudes toward both public health and etiology. Caldwell decried the meddling of
legislative bodies in principles of medicine, and the Lazaretto was a stark example of
that. At a speech given to the Philadelphia Medical Society in 1807, Caldwell reminded
his audience that, initially, the consensus had been that yellow fever was “highly
contagious, and was very generally believed to have been introduced into Philadelphia by
a sickly vessel from the island of St. Domingo.” In response, Philadelphia and other cities
adopted quarantine regulations “[d]irected exclusively against contagion supposed to be
in some way attached to vessels arriving from tropical climates,” while ignoring “the real
cleanliness of the vessels themselves.” Caldwell declared that the city’s quarantine laws
established following the 1793 yellow fever epidemic “were nothing more than mere
copies of similar institutions in the old world,” and “[i]n matters where physical science
Benjamin Rush was similarly vocal in his disapproval of the operations of the Lazaretto, and of quarantine in general. Rush admitted that ships carrying “putrescent articles,” as well as ships “from a distant or hot country,” should be detained until “the air that has been confined in her hold has been discharged.” Where quarantine laws went wrong, in Rush’s estimation, was in their severity. Rush likened Philadelphia’s quarantine laws to “the conduct of the man, who, in attempting to kill a fly upon his child’s forehead, knocked out its brains.” According to Benjamin Rush, a belief in non-contagion “will deliver the states which have sea-ports from four-fifths of the expences of their present quarantine laws and lazarettoes,” and “[i]t will deliver our merchants from the losses incurred by the delays of their ships, by long and unnecessary quarantines.” Furthermore, “[i]t will deliver our citizens from the danger to which they are exposed, by spending the time of the quarantine, on board of vessels in the neighbourhood of the marshes, which form the shores of the rivers or coasts of quarantine roads.”

In *A Treatise on the Plague and Yellow Fever*, Scottish surgeon and ardent contagionist James Tytler, who privileged purgatives over bloodletting, “both as preventives and medicines,” ascribed, among other causes, a divine origin to yellow fever. Hence the fact that “in certain cases neither human skill nor care can prevent or cure the disorder.” Tytler explained that “death is the consequence of Adam’s

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142 Ibid., 107-108.
transgression, yet I do not find that disease of any kind was threatened except in cases of positive transgression, long after the days of Adam.” Essentially a divine punishment, yellow fever did not arise from passions of the mind, contrary to the opinions of physicians like Rush, who held that strong emotions could predispose one to illness. Fear, Tytler argued, “is not always sufficient to produce the disease.” He reported the case, mentioned by Rush, of “a young woman so exceedingly fearful of the disease, that she was troublesome to all around her.” Yet, when exposed to yellow fever, she “escaped unhurt.”

Charles Caldwell, a prickly and combative student of Rush’s with a perennial chip on his shoulder, did not mince words when it came to his opinion of Tytler. Perhaps he saw the worst aspects of his own personality reflected in Tytler’s shortcomings. Caldwell accused Tytler of creating “a physico-theological monster,” and “a Colossus of bigotry, error, and absurdity,” and described him as “a plodding compiler in medicine, much more accustomed to reading than to thinking, and much more remarkable for illiberal invective than for solid argument.” Caldwell, like most noncontagionists, preferred to point to environmental causes of yellow fever; an unusually long, warm, or wet summer, for instance, could produce the conditions necessary for a yellow fever outbreak. Some physicians connected yellow fever with mosquitoes, though the relationship they proposed


was correlational rather than causal. The time leading up to yellow fever witnessed the appearance of new insect species, unusual numbers of certain established species, and the disappearance of others. Rush noted that “[t]he common house fly has nearly disappeared from our cities, moschetoes have been multiplied, and several new insects have appeared, just before the prevalence of our late malignant epidemic.” Likewise, Caldwell remarked that a “profusion of musquitos” frequently accompanied yellow fever. The appearance of unusual numbers of mosquitos indicated a change in climate, which in turn excited the development of yellow fever. In a sense, then, Rush and Caldwell did believe that mosquitos brought with them yellow fever, but only in the sense that warm weather brought with it mosquitos. More ambiguously, Nassy “observed on three persons only, some few red spots, like the bite of a fly, on the stomach or breast.” Like the others, Nassy did not attribute the disease to insect bites. Instead, these bumps were merely a symptom of yellow fever, and a relatively rare symptom at that.

Those who believed in the unity of disease felt that inquiring into an epidemic’s remote cause was superfluous. University of Pennsylvania medical student Alexander May explained in his antinosological dissertation, published in 1800, that “[t]hus the mariner lets go the halyards in a squall, without regarding the quarter from whence the wind comes. He knows full well that the wind is a unit, and that its mode of destruction is

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145 Phineas Jenks 33-34.
146 Rush, An Inquiry, 17.
147 Caldwell, An Address, 16.
148 Nassy 23.
the same, whether it blows from the east, the west, the north, or the south.”

149 Their opponents, whom they sneeringly referred to as nosologists, believed that a disease’s etiology was the primary factor in determining regimes of treatment.150 A nosologist, according to adherents to the doctrine of unity of disease, could easily be led astray, misdiagnosing yellow fever as typhus, and catastrophically treating it as such.151 Medical historian W. F. Bynum has pointed out, however, that “[t]he very act of diagnosis carries with it nosological overtones, for calling a disease measles rather than smallpox, or phthisis rather than pleurisy, implies the existence of some classifying criteria, whether implicit or explicit.”

152 Anti-nosologists reconciled this cognitive dissonance by distinguishing themselves from ontologists. From nosology, it was a short step to ontology—in other words, the belief that diseases were entities rather than syndromes produced by whatever remote cause, such as miasmata. Ontology was akin to the notion of disease specificity, the idea that diseases were as fundamentally distinct as one species of animal from another. Anti-nosologists believed that their physically and sensorially intimate knowledge of patients’ habits and bodies afforded them greater, more accurate

149 May 25.

150 Daniel Dobbins, in writing on an 1806 eruption of scurvy in Philadelphia Prison, argued that, “[w]hen disease occurs we are naturally led to investigate the cause in order to effect a cure, and more effectually prevent a return.” See Daniel Dobbins, “On Scurvy as It Appeared in the Philadelphia Prison in the Spring of 1806” (1807), 378.748 POM 1.1, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 5.

151 May 22.

knowledge of the workings of disease. As medical historian Margaret Pelling has described, “[t]he ontological view of disease stresses the realities of disease entities and therefore the constancy of any given disease from patient to patient. This contrasts with holistic interpretations, stressing instead the individuality of the patient and the uniqueness of his or her experience of disease.”

Physicians of the eighteenth century often discussed the relationship between yellow fever and other diseases, including typhus, and the easy slippage between one disease and another. During the era of yellow fever’s prominence in Philadelphia, the holistic view described by Pelling held a position of dominance in American medicine. In treating morbid sensations, physicians carefully adjusted treatment plans according to the specific characteristics of a patient, along with external factors like weather. Closely allied with this belief was the idea of sympathy, a complex sequence of relationships that united the body’s diverse systems. Believers in sympathy—among whom Rush was one of the most prominent—understood disease as a fluid entity that could easily but predictably transcend bodily structures, circulating throughout the body and inciting morbid changes wherever it went.


However, physicians were not unanimous in their beliefs on how far the holistic principle could apply to yellow fever. English physician Edward Nathaniel Bancroft, known primarily as a botanist but also for his work on yellow fever, referenced the belief of “some physicians of great respectability … that the yellow fever is either commonly or occasionally a sort of hybrid or mongrel disease,” comprising equal parts of the contagion of typhus fever and the deleterious effects of “marsh effluvia.” Although Bancroft allowed that there was no proof against the possibility of “the united action of contagion and miasmata,” he appealed to Occam’s Razor in his objection that “in general, it is not philosophical, or proper, to assign two causes for an effect which may be produced by one.”

Holistic approaches to understanding disease went hand in hand—if sometimes uneasily—with humoralism, which historian of medicine Vivian Nutton has described as “at one and the same time highly individualistic, for each person and each bodily part has their own natural humoral composition (also known as *krasis*, mixture, or temperament), and universal, for the range of variation is limited and the same patterns of illness (diseases) can be seen to occur in many individuals.” Disease ontology, on the other hand, was fundamentally at odds with Galenic humoralism. The Baconian model of case histories that ascended to prominence in American medical education in the early nineteenth century supported the development of ontological approaches to

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157 Nutton 281.
understanding disease. Such case histories helped physicians “arrive at a consistent picture of a particular disease,” according to Pelling, and “stressed not only signs and symptoms, but also the course followed by a given disease over time,” both within the individual and within communities over longer periods of time.158

In 1820, fever returned to Philadelphia. Dr. Samuel Jackson, at the time a young physician, recalled that a warm and humid summer had followed a “very wet and backward” spring that year. Between May and September, “[b]etween four and five hundred persons were affected with” what Jackson described as “a fever of a bilious and remittent character, combined with typhoid symptoms,” first appearing in the vicinity of the Almshouse. While a handful of poor whites fell victim, “[i]t was so generally confined to the blacks, that it acquired the name of the negro fever.” The disease itself “was quite manageable”—problems arose from the conditions in which the sick lived, “in confined and crowded rooms, amidst every kind of filth and vile garbage,” and “constantly surrounded by the debauched, vitious, and intemperate.” Attitudes toward the sick aggravated the already bleak situation: “Few indeed could be induced to persevere in attendance, amidst scenes of dissoluteness and misery, the senses constantly offended with the most nauseous exhalations and disgusting exhibitions, and finding prescriptions and advice almost wholly unattended to.” Jackson described “instances, where it was difficult, sometimes impossible from a want of sympathizing feeling, even amongst the friends and relatives of the sick, to induce them to go a few squares to obtain proper
remedies.” In Jackson’s estimation, as in Rush’s, strong emotions hindered the treatment—and perhaps promoted the spread—of epidemic diseases.

While the Board of Health busied itself with tackling the “obvious causes” of the disease, the City Hospital opened its west wing to poor families affected by it, the sick themselves being removed to “a small building near the Schuylkill.” Doctors initially responded to the 1820 outbreak “with depletion,” often with dire consequences: “The ill-success that attended what was considered the regular and established practice in malignant fever, gave rise to a desire to seek for some more powerful auxiliary, than was then at command.” Departing from bleeding, cathartics, and mercurials, physicians employed turpentine and lead acetate with mixed results. But Jackson was hopeful: “Though we may feel ourselves thus hopeless and helpless in succouring the victims of those fatal diseases, when raging around us as epidemics, yet we can felicitate ourselves, that it is not our unhappy fate to be necessarily and inevitably subjected to their invasion.” Jackson vehemently denied the possibility of contagion, listing numerous instances when by “the phenomena and laws of contagion” the disease should have spread from the sick to the healthy—in “narrow and confined, and generally filthy” environments—and yet it did not.

By 1820 the discussion of yellow fever’s noncontagious nature had become firmly transatlantic and translingual. From 1820 to 1822, French physician Nicholas Chervin asked physicians in American port towns whether or not they believed that

159 Samuel Jackson, *An Account of the Yellow or Malignant Fever, as It Occurred in the City of Philadelphia in 1820* (Philadelphia, Pa.: M. Carey & Sons, 1821), 12-14.
yellow fever was contagious, and from whence it originated. The vast majority of Chervin’s Philadelphia contacts assured him that the disease was not contagious. Out of fifty-six respondents, only two espoused clearly stated beliefs that the fever possessed contagious qualities under any circumstances. The quiet, aging physician Samuel Powell Griffitts told Chervin that yellow fever could spread from person to person in confined spaces, like a prison or the hold of a ship, or in a close and filthy apartment.\textsuperscript{161} Dr. William Currie, an unofficial historian of the disease and by then becoming an old man as well, wrote that “I am also convinced that it is only contagious or communicated from those that are sick or affected with it to those that are in good health in situations where the air is confined and rendered impure by exhalations from putrifying [sic] vegetables or other putrifiable [sic] substances.”\textsuperscript{162} Contagionism was more than ever a minority view among physicians.


\textsuperscript{162} William Currie, letter to Nicholas Chervin, June 1, 1821, Nicholas Chervin Papers. Some other respondents expressed more ambiguous opinions, like that of the elderly Thomas Parke, a founder of the College of Physicians, who got sick after caring for sufferers in 1793, but believed yellow fever was “not \textit{specifically} Contagious, like the Small Pox, which in all Seasons and Situations spreads & prevails, among all who have not already had it, or who have not been vaccinated.” (Thomas Parke, letter to Nicholas Chervin, May 25, 1821, Nicholas Chervin Papers.) William Barnwell, a correspondent of Thomas Jefferson’s, believed yellow fever could spread from house to house by means of “morbid Effluvia,” but not directly from person to person. (William Barnwell, letter to Nicholas Chervin, April 30, 1821, Nicholas Chervin Papers.). Finally, the Quaker obstetrician Thomas C. James acknowledged “I certainly cannot be so absurd as to consider the \textit{malignant} or yellow Fever contagious in the same sense that Measles, Small Pox & Hooping Cough are found to be so; but that the concentrated Effluvia from the sick under the peculiar & concomitant circumstances of a foul or impure Atmosphere, neglect of Cleanliness & defect of Ventilation may render the Disease communicable to those who come into the \textit{immediate} contact with the Patient.” (Thomas C. James, letter to Nicholas Chervin, May 19, 1821, Nicholas Chervin Papers.)
The “black matter,” or “black vomit,” ejected by severely ill patients in particular worried—and fascinated—physicians. In support of the doctrine of noncontagion (and, at least obliquely, of solidism), John Redman Coxe, an early proponent of vaccination, informed Chervin that “[e]xperiments were made by swallowing the Black Vomit, or by inoculating with it, with perfect impunity; not a solitary instance could be adduced in favor of contagion!” Coxe may have been referencing the experiments of Isaac Cathrall. In a 1796 pamphlet, Cathrall had described the black vomit as having “[r]ather a saccharine taste, perceptibly acrid to the lips.” Indeed, his experiments on the black matter—feeding it to cats and dogs, as well as to himself—led him to conclude that “the black matter is merely an inert secretion,” a harbinger of death rather than a direct cause of it. But Cathrall had not endorsed a solidistic understanding of pathology, and he certainly did not favor noncontagionism; he had reported instances when bodily fluids—including vomit—had produced illness.

Nevertheless, Chervin’s informants reported that sustained and pervasive contact with the black vomit did not make them sick—at least, not with yellow fever. Dr. Isaac Heylin recalled a patient, also a physician, “covering me with the matter ejected from the


164 Cathrall 79, 93. Similarly, based on his dissections of yellow fever fatalities in the City Hospital in 1805, Edward Lowber described the fluid of the black vomit as having “a very faint sweetish animal odour, and rather a saccharine taste.” See Edward Lowber, “An Essay on the Morbid Appearances Observed After Death in the Yellow Fever” (1807), 378.748 POM 32.1, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 29.
stomach in my endeavour to keep him in bed being delirious.” Peter Miller, known for his research into easing parturitional pains, remembered his exposure to yellow fever patients, having “supported some of them in my arms while in the act of ejecting from their stomachs the black-vomit, and have inhaled the vapours arising therefrom with impunity.” Lazaretto physician George Lehman’s “nurses slept in the same room with them [sick persons sent to the lazaretto hospital], caught the Black vomit in Tumblers for my inspection, had it ejected over their Hands, and Clothes, yet they were never sick a moment.”

Lehman, a student of Rush and a friend of Jackson, was—like most physicians of the time—an enthusiastic noncontagionist. John Perkin, who had been appointed to the Board of Health in 1805 and observed much of the yellow fever outbreak of that year, told Chervin that “I constantly resided at the Hospital seldom leaving it for a single hour, breathing an atmosphere saturated with the effluvia of yellow fever patients, sleeping on a bed on which patients had died with this disease, and examining their bodies after death,” but neither he nor the other attendants contracted the disease. Like the nauseating breath observed by Rush, bodily effluvia could cause illness in those in close and prolonged proximity to yellow fever patients. The young physician Benjamin Coates told Chervin the story of “[a] lady who was repeatedly in the room with Abraham Barker [a merchant] during his last illness with yellow fever [in 1820], and was rendered very ill

165 Isaac Heylin, letter to Nicholas Chervin, May 15, 1821, Nicholas Chervin Papers.
166 Peter Miller, letter to Nicholas Chervin, May 18, 1821, Nicholas Chervin Papers.
167 George Lehman, letter to Nicholas Chervin, May 24, 1821, Nicholas Chervin Papers.
168 John Perkin, letter to Nicholas Chervin, May 26, 1821, Nicholas Chervin Papers.
by the effluvia of the body after death,” but she did not contract yellow fever—rather, “only a slight bilious remittent of 3 days duration.”

While Nathaniel Chapman denied the possibility of yellow fever being contagious, he also disagreed with Rush’s explanation of the isolated instances of attendants falling ill as “originat[ing] in an exhalation from the excretions of the patient, as the urine, the fæces, perspiration &c.” An ardent solidist, Chapman denied the possibility that bodily fluids held any vital properties; as a result, only organs and other fibrous structures could be said to become diseased. Besides, according to Chapman, “no such filth is permitted to accumulate in Hospitals or elsewhere and to become putrid, and, were it to be done, the disease produced by it, would be as diversified in its nature, as the effluvia from these various sources.” In other words, illnesses like yellow fever did not need bodily filth in order to spread. Rather, Chapman gave environmental factors primacy in explaining the origins of the disease. A few years after his letter to Chervin, Nathaniel Chapman told his students that “[i]t appears from a register kept in this city for 25 years that the yellow fever never made its appearance unless the average heat of the atmosphere was very great, when the temperature was not equal to this average degree there was no fever.” To Chapman, yellow fever was connected to factors outside of the control of physicians and public health endeavors. Quarantines could never prevent

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169 Benjamin Coates, letter to Nicholas Chervin, May 15, 1821, Nicholas Chervin Papers.
171 Nathaniel Chapman, letter to Nicholas Chervin, May 17, 1821, Nicholas Chervin Papers.
172 Worthington 95.
epidemics, and physicians could not arrest its progress; the best they could do was be ready to treat each case as it came.

Physicians’ discussions of yellow fever reveal a minute attention to geographic detail, which stemmed from their commitment to miasmatic theory. Physician and proto-somnologist Samuel Conover recalled that “[i]n the epidemick pestilence of 1793, denominated the yellow fever, I commenced my attendance on the sick, labouring under the influence of this malady, directly on its first appearance, in north water, above arch street, opposite Mr. Le Magre’s,” but that he later “was seized with the disease, and had it very severely, at my residence in north 3d, above arch street, three squares, & upwards, westward from water street, the place of infection, where I derived the disease.” Samuel Jackson, only six years old at the time of the 1793 epidemic, nevertheless maintained an interest in the disease’s geography. He presented Chervin with data regarding the 1793 epidemic’s impact on different streets, “according to a census taken in the months of October & November.”

With characteristic attention to detail, Jackson also carefully noted the spatial—and temporal—boundaries of later outbreaks in 1805, 1819, and 1820. Jackson estimated that five or six hundred persons contracted yellow fever in 1805, most of which were “confined” to Southwark, in a district initially “bounded northward by the south side of Almond Street, Southward, by the south side of Catherine Street, & eastward, by the west side of Front Street,” only going as far west as Second Street before September 4th. By September 13th, however, the disease had “extend[ed] north to South Street; south to the

173 Samuel Jackson, letter to Nicholas Chervin, May 22, 1821, Nicholas Chervin Papers.
Navy Yard; and west to Fourth Street,” with an additional 166 cases in the city and
Northern Liberties. Jackson explained that “[i]n most of these last cases, however, it was
ascertained, that the disease had been taken, either from living or visiting in the infected
suburb of Southwark. They were scattered over the City in every quarter; many in Water
Street, in various narrow & uncleanly alleys, & in small, crowded & ill-ventilated
dwellings.”

<table>
<thead>
<tr>
<th>Streets</th>
<th>Number of inhabitants who fled</th>
<th>Number of inhabitants who remained</th>
<th>Total</th>
<th>Number of Deaths</th>
<th>Percentage of Deaths to total inhabitants</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>White</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>426</td>
<td>6</td>
<td>598</td>
<td>37</td>
<td>1067</td>
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<tr>
<td>Front</td>
<td>1047</td>
<td>29</td>
<td>928</td>
<td>140</td>
<td>2144</td>
</tr>
<tr>
<td>Second</td>
<td>1060</td>
<td>32</td>
<td>928</td>
<td>113</td>
<td>2133</td>
</tr>
<tr>
<td>Third</td>
<td>784</td>
<td>35</td>
<td>706</td>
<td>68</td>
<td>1593</td>
</tr>
<tr>
<td>Fourth</td>
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<td>14</td>
<td>889</td>
<td>109</td>
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<td>21</td>
<td>1</td>
<td>113</td>
<td>29</td>
<td>135</td>
</tr>
</tbody>
</table>

Figure 3: "Table showing the number of inhabitants, of deaths, & ratio of deaths to
inhabitants, on different streets, in the City of Phila, during the Yellow Fever of 1793,
according to a census taken in the months of October & November." Adapted from
Samuel Jackson, letter to Nicholas Chervin, May 21, 1821.

Jackson tallied only twenty-five cases of yellow fever in 1819, between the dates
of June 23 and October 4. The first eight occurred “in a block of old, decaying frame
houses, which were in a very foul condition, on Market Street wharf.” Two more cases
followed “in Front Street, near Pine, at the same time [as each other], & in the same
house,” though Jackson appears to have forgotten the precise date, identifying it as “the
[blank] of August.” Yellow fever again manifested on the 29th of August, this time on

174 Ibid.
Swanson Street and Huddle’s Alley in Southwark, and “[b]etween that date & the 4th Oct, about fifteen cases occurred in this vicinity.” Of the twenty-five cases that year, twenty-one died. “This,” Jackson noted, “was a most uncommon mortality, & displays the very great malignancy of the disease.” Even so, “it did not spread beyond the limits, in which it appeared, in each location.” The following year saw 125 “subjects of Yellow Fever,” according to Jackson’s count, “nearly half of whom were sick in different parts of the City, not included in any of the infected districts; but who, it was ascertained in most of the cases, had been, a short time previous to their illness, in some one of the situations, where the disease prevailed.” Despite the squalor in which the sick lived, Jackson never saw the disease communicated from the sick to the healthy.  

At the time, Jackson was the president of the Board of Health, the body in charge of mitigating the effects of the disease by implementing public health initiatives like forced removal to the countryside. Even in 1805 the public health consensus cautiously privileged the doctrine of contagion above that of localism. The Board jealously guarded its admittedly tenuous authority. Laypersons often resented the actions of health officers—which Jackson claimed were frequently “misrepresented”—and many Philadelphians believed them injurious to commerce and daily life. In 1797, the Board of Health ordered that “a yellow flag was to be placed to houses containing, or which had recently contained, the sick,” but “the yellow flags, were pulled down, in spite of the

175 Ibid.
176 Taylor 173.
177 Samuel Jackson, An Account of the Yellow or Malignant Fever, 7-8.
threatened penalty of three hundred dollars,” signaling the level of antipathy directed toward public health measures by the population at large.178

For that matter, some physicians felt the same way—particularly those who espoused a local origin of yellow fever—and there was no shortage of animosity between physicians and the non-professional members of the Board. The chip on his shoulder as large as ever, Charles Caldwell griped around 1803 that “[o]ur board of health now consists, and during the present establishment, will always consist of men of common minds, common educations, and common acquirements.” And yet these men were tasked with duties “exclusively of a scientific and professional nature.” Caldwell indignantly argued that “[i]t were much better to have no board at all, than to have one incompetent to the fulfilment of their duty. For, as error is worse than ignorance, so is the maltransaction of public concerns more injurious than the total neglect of them.” As a remedy, Caldwell proposed “[t]he establishment of a committee of health competent in points of talents and information, to the high trust reposed in them, and invested with a proper degree of legal authority.” Why place such responsibility in the hands of “common characters”?179

When yellow fever struck Philadelphia in 1820, the epidemic began among the Black residents of the southern portion of the city. Almost three hundred cases came under the care of the Almshouse attendants, and roughly a quarter of cases proved fatal.


179 Caldwell, Thoughts on the Subject of a Health-Establishment, 5-6, 11.
University of Pennsylvania medical student Samuel Jones observed in his epic dissertation that the disease began “with a morbid, and pleasurable excitement.” He described the case of a twenty-four-year-old woman who worked as an assistant nurse. After recovering from a minor surgery, she asked to be discharged. Jones remarked that “I was then astonished at the peculiar beauty which lighted up her countenance, and the exhilaration of her spirits, her eye was most remarkable, there seemed to be an acuteness of intellect, and capacity of mind new to her, with the liveliest sensibility she thanked me for her health, and repeatedly declared, she had never in her life felt so well.” Suspecting a case of “morbid hilarity” preceding a fever, he persuaded her to stay. Sure enough, she quickly sickened, and “a coldness pervaded the surface of her body, sensible of a great inward struggle.” She “seemed more terrified with the horrors [sic] of death, than a malefactor at the stake.” She died the following morning. Upon post-mortem examination Jones found her stomach inflamed, but free of the black vomit typically associated with yellow fever. Shortly thereafter he observed the same kind of morbid hilarity “in a healthy young black woman.” Although clearly very sick, “her skin was never harsh, or above the natural temperature, on her countenance there was a feeble smile,” though “the region of her stomach was somewhat tender when pressed upon.” On the third day of her illness, her skin adopted “a peculiar cadaverous feel,” which foreshadowed her death. Her postmortem examinations revealed a similarly inflamed stomach, this time accompanied by the standard “coffee ground matter.” In patients with the fever, Jones noted that “[t]he feces were not infrequently so acrid, as to produce great distress in the bowels, and to excoriate the rectum, and parts without the anus.” Furthermore, “[w]hen long retained the feces were intolerably fœtid,” with an odor “resembling that from putrid meat.” Patients
did not exhibit subsultus tendinum, a hallmark of typhus according to Jones. One man had a throat so sore that he preferred thirst over swallowing. When offered tea, he refused, “saying it would murder him.”

According to Jones, “[t]he absence of natural modesty, indicated by exposure of the body with indifference, was amongst the bad signs.” Although physicians had privileged access to patients’ bodies, no formal code of ethics yet directed the physician-patient relationship. A patient’s pathological immodesty, though it could portend the patient’s demise—and serve as a source of some embarrassment to the physician—served to render the patient’s body more fully visible to the discerning eye of the physician. Jones argued that it was important to carefully study the patient’s countenance: “It is by patient watching at the bedside only, that that intimacy with the physiognomy can be acquired, which distinguishes the eye of a discriminating physician.” Patient watching—and patient-watching—afforded the dutiful physician intimate knowledge of his patient’s body. This intimacy allowed not just for better, more effective treatment, but also a more accurate understanding of the human body and the morbid sensations that wracked it.

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180 Samuel Jones, “The Causes, Nature, Symptoms, and Treatment of the Endemic Fever Which Prevailed in the City of Philadelphia During the Summer of 1820, Exhibiting a Pathological Division of the Yellow Fever into Four Distinct Classes, with the Diagnostic Signs, & Treatment, Appropriate to Each” (1822), 378.748 POM 16.1, Kisak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., n.p.

181 It was not until 1847 that medical ethics in the United States became standardized with the foundation of the American Medical Association. See A Code of Medical Ethics of the American Medical Association: Adopted May 1847 (Philadelphia, Pa.: T. K. and P. G. Collins, 1848).

Jones had had occasion to witness a virulent bilious remittent fever epidemic in a women’s ward of the Almshouse the prior summer. Although only three patients had died, the epidemic had swept through the entire ward, including nurses and assistants. Jones theorized that the source of the epidemic was the streams of noxious emanations—“though the senses could not detect” them—wafting up from the sick wards. Jones concluded that the disease was not contagious. On the contrary, Jones believed that epidemics were by definition not contagious, and that contagious diseases were “less partial to clime or country” than epidemic and endemic diseases. Based on his observations in 1819 and 1820, Jones concluded that yellow fever and typhus were “antagonising powers”—that “[t]he one retires as the other advances.” His intimate observations of living patients “elucidated by the scalpel,” Jones proposed the existence of four classes of yellow fever: bilious, biliogastric, gastrobilious, and gastric. The same morbific poisons could produce different illnesses, depending on how they were introduced to the body. The dissections performed by Jones, along with the symptoms of the living, proved “a transfer of disease … from the liver to the stomach.” Importantly, in Jones’s estimation, “[t]he stomach is more than any other organ, capable of immediate transmutations, from health to the varied conditions of disease, & vice versa.”

Bilious iterations of yellow fever did not present any abdominal tenderness, and were best treated with depletive remedies. The biliogastric class presented more stomach afflictions, including a “gnawing” sensation, and abdominal tenderness. They were likewise treated with “copious bloodletting,” up to thirty ounces at a time, along with

183 Ibid.
emetics to counteract the “accumulation of bile” and to prevent the inflammation of the stomach. Mercurial cathartics “answered best” in treating costiveness. Blisters were effective if applied early and on the abdomen. Cold bathing could be useful: “It was applied by frequently passing a sponge of cold water over the whole body. Sometimes exceedingly pleasurable sensations, were derived from merely sponging the breast and temples, or feet, or allowing the patient to have a basin of cold water in which to place his hands, or when a greater effect was desirable a sheet, all other covering removed, wrung out of cold water, was applied over the body.” Jones observed “that cold water in whatever way applied, was diuretic, but most so when injected into the bowels, occasionally a very comforting application of the remedy.” Windows were kept open to provide for ample circulation of fresh air, as a strange “soporific” halitus seemed to emanate from the patients, causing Jones to faint. In one case, the terrible grief of a patient’s mother excited morbid passions in the patient herself, leading to her death. 184

In gastrobilious cases, one of the first symptoms to appear was abdominal tenderness, though “[a]ll the sympathies of life, seemed to be engaged from the first.” Vomiting produced great distress, and costiveness was general. Warm bathing with water or brandy proved effective, as did vigorous rubbing with a “stimulating embrocation.” In such cases only moderate bleeding was useful—too much or too little could be disastrous. Jones described the case of a young man “taken with a view to suicide,” sent by Chapman his colleague to the Almshouse. His stomach having been emptied and then injected with wine whey, “he was well-rubbed.” When the man became utterly

184 Ibid.
insensible, Jones “poured a stream boiling upon his bosom, [and] his countenance was at
the instant, thrown into the most frightful distortions.” Jones repeated the treatment, “by
which his skin was inflamed and vescicated [sic].” Jones “stood with him all night,” and
the man died in the morning. Finally, gastric fever—“one remove further” from bilious
fever, and “the last link in the chain”—was characterized by an “entire absence of bile,”
clearly separating it “from the other forms of the disease.” In such cases, emetics were
“altogether dangerous.”  

In 1821, a bilious “black fever” appeared in Northern Liberties, attacking “the
most indigent and miserable of the negroes.” According to Samuel Gwinner, a medical
student at the University of Pennsylvania, their impoverished condition precluded access
to medical care, and they hesitated to bring their illnesses to the attention of the
Guardians of the Poor. As a result, they usually arrived at the Almshouse already at
death’s door. These patients exhibited abdominal pain “so exquisite as to cause the
patient to cry out, on the slightest pressure being applied to the part.” Caregivers could
resort to frictions if necessary, but Gwinner noted that they should be “steadily
persevering.” Gwinner’s intensely focused dissections of the fever’s victims formed a

185 Ibid.
186 Samuel C. Gwinner, “Fever at the Philadelphia Almshouse in 1821” (1823), 378.748
POM 16.2, Kislak Center for Special Collections, Rare Books and Manuscripts,
University of Pennsylvania, Philadelphia, Pa., n.p. Like Gwinner, Savannah native Philip
Minis remarked that the continued (as opposed to intermittent or remittent) type of
yellow fever uniformly produced “a sense of burning in the stomach, and extreme
soreness about the epigastric region. This sensation was sometimes so great, that I have
heard patients cry out as if in extreme agony, merely from touching the part with my
finger.” See Philip Minis, “An Inaugural Dissertation on Yellow Fever” (1823), 378.748
POM 19.2, Kislak Center for Special Collections, Rare Books and Manuscripts,
University of Pennsylvania, Philadelphia, Pa., 11-12.
crucial part of his medical education. Historian of medicine Susan Lawrence has shown how, over the course of the eighteenth century, “in hospitals and clinics throughout Europe, physicians started to visualize *pathological* anatomy, discovered through extended experience with dissection and post-mortems. In turn, practical anatomy became a much more important medical subject, as did experience with patients from the bedside to the autopsy-table.”187 This form of medical education in the United States lagged behind that in Europe by several decades, rising to prominence by the 1820s, based on medical school dissertations of the time.188

Dissections like those performed by Gwinner and other medical students in the 1820s convinced them that yellow fever was first and foremost a disease of the stomach.189 But even in the 1820s physicians and their students debated how best to treat yellow fever. Philip Minis of Savannah wholeheartedly believed that “depleting and sedative” remedies constituted the only appropriate course of treatment for yellow fever; this much should have been “obvious to every enlightened practitioner,” he wrote in his medical school dissertation. But he and his preceptor nevertheless experimented with remedies used by physicians in Philadelphia and Charleston, noting them to be uniformly disastrous. In fact, “[o]n dissection of those persons who took the [oil of] turpentine”—a favorite medicament of Philadelphian physicians, Minis was careful to note—“the


188 Rachel Ponce has noted that, in the early nineteenth century, “[t]he study of human anatomy through the dissection of human cadavers quickly distinguished itself as a, if not the, defining feature of a reputable medical education.” See Ponce 333.

189 See, for instance, Minis 16.
inflammation [of the stomach] appeared more extensive, than those who were treated in a different manner.”

Paul Hamilton Wilkins, having worked in Savannah’s city hospital in 1822, came to believe through post-mortem observations (and his preceptor’s guidance) that yellow fever was not inflammatory, but rather a sedative disease—a kind of vascular paralysis. Wilkins wrote that, “[g]overned … by a variety of opinions, & systems founded upon them, the Physicians of Savannah have adopted plans of practice, as diametrically opposite, as the conclusions which they drew from different premises.”

Thus physicians who classified yellow fever as an inflammatory disease practiced depletive remedies like bloodletting, while those who considered the disease sedative employed stimulants. Some, like those who closely followed the doctrines of William Cullen, would have believed a particular iteration of fever—including yellow fever—could be classified according to its symptoms as either synocha (an inflammatory fever), typhus (marked by delirium), or synochus (an intermediary category between synocha and typhus).

Even as the threat of yellow fever in the North receded, debates about the efficacy and justness of quarantines continued. In 1821, Joseph Parrish—one of few physicians who still believed yellow fever to be contagious under certain circumstances—communicated in a letter to Nicholas Chervin: “I do most assuredly believe in the

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190 Ibid., 23-25.

191 Paul Hamilton Wilkins, “An Inaugural Dissertation on Yellow Fever as It Appeared in Savannah in 1822” (1825), 378.748 POM 19.1, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 1, 10-12.

necessity of maintaining rigid quarantine regulations at that period of the Year, when experience has taught us, that danger is to be apprehended.” The reason for his support came from “the proximity of the United States to the West India Islands,” where he believed many dangerous diseases originated. Europe, on the other hand, did not have to worry, because the disease would run its course before the ships reached Europe. Thus, Europe’s quarantine practices were, in his estimation, “unnecessarily severe,” and he denounced European lazarettos, “where Persons subjected to Quarantine in them, are treated more like Criminals, than unoffending Individuals.”

Parrish was unusual in his support, as lukewarm as it may have been, of the doctrine of contagionism, but his misgivings about quarantine’s operations were by no means uncommon. Thomas Mitchell, a young physician-chemist who had served as the Lazaretto physician in 1815, expressed to Chervin his frustration with “the whole of our Health laws.” Mitchell found the laws, all of which were “bottomed on the idea of the contagious character of Yellow Fever,” to be “nothing better than a farce of inconsistency,” for they “obliged the Lazaretto officers to visit alternately or in succession as they arrived on the Quarantine station, healthy vessels, and ships infected with yellow fever.” Moreover, “so soon as a patient in the hospital became convalescent, the physician was required to give him a regular discharge, whereupon he was permitted to proceed immediately to Philadelphia.” This provision befuddled Mitchell: “On what principle, a law founded on the contagious character of yellow fever, can permit a convalescent to go directly from a yellow fever hospital to a populous city, I cannot

193 Joseph Parrish, letter to Nicholas Chervin, May 1821, Nicholas Chervin Papers.
imagine.” Even if yellow fever was contagious, Mitchell argued, Philadelphia’s health laws pertaining to the operation of the Lazaretto were exceptionally poorly designed to handle the prevention of a contagious disease’s spread through the city.

George Lehman wrote to Chervin that he had never seen a case of yellow fever in his capacity as Lazaretto physician; rather, “all those afflicted with this disease who have fallen under my notice have been patients who sickened in the city and were sent to the Hospital for treatment.” In Lehman’s experience, then, Pennsylvania Hospital was a much more important public health institution than the Lazaretto was, certainly when it came to the treatment of yellow fever. None of the patients he treated in the Hospital had any “connexion with the Shipping,” which further supported Lehman’s conviction that the disease was noncontagious. Contagion, in the imagination of Lehman and other physicians, implied importation from another locale. Diseases that originated locally simply could not be considered contagious, because they owed their propagation to environmental factors.

In 1823, the young physician Hugh Hodge delivered a triumphant speech before the Philadelphia Medical Society in which he declared: “Behold the enduring monuments of [the medical profession’s] incalculable usefulness, in the extensive and munificent establishment of dispensaries, lazarettoes, hospitals, and the innumerable societies formed by the virtuous and the benevolent in every clime for the sufferings of man.”

194 Thomas Mitchell, letter to Nicholas Chervin, May 12, 1821, Nicholas Chervin Papers.  
195 George Lehman, letter to Nicholas Chervin, May 24, 1821, Nicholas Chervin Papers.  
Hodge had worked as a ship’s surgeon only a few years prior, and his experience—despite his youth—would have given him a great deal of authority on the matter of lazarettos, having dealt with them in this professional capacity. Hodge knew how lazarettos operated from the perspective of a ship’s surgeon, rather than a lazaretto physician. Consequently, Hodge expressed what he perceived as the great beneficial values provided by lazarettos. Not only were lazarettos “benevolent” in their aims, the practical advantages they offered port communities like Philadelphia outweighed any constraints they put on individual or commercial liberty, at least in Hodge’s estimation. 197

Physicians had every reason to confer with their colleagues in other cities, especially with a disease like yellow fever, which so often struck port cities. Joseph Ramsay of Charleston reported that, when yellow fever appeared in that city in the summer of 1824, it primarily attacked “Strangers” who had only been in the city less than a few years. In fact, the first case to present itself that summer was one Thomas Mitchell of Philadelphia, a newcomer to Charleston, who died shortly after his admission to the

197 Public health institutions like the Lazaretto, as Mary Mitchell and David Barnes have pointed out, are not “immediately legible” as “historic” structures worth preserving. See Mary Mitchell and David S. Barnes, “Storyscapes and Emplacement: Layer by Layer,” *Change Over Time* 3, no. 2 (Fall 2013): 164. Perhaps for similar reasons, they are often neglected as historical structures worth remembering in historical narratives. Referencing the work of Charles Brockden Brown, literary scholar Joseph Letter has argued “that the lazaretto is best understood as a Bakhtinian chronotype, a concrete literary expression of a new historical epoch.” But the lazaretto was also “an ’othered’ space that exists both within and outside the constraints of society.” See Joseph J. Letter, “Charles Brockden Brown’s Lazaretto Chronotype Series: Secret History and ‘The Man at Home,’” *Early American Literature* 50, no. 3 (Fall 2015): 711-712. In some ways, the same could be said of any number of institutions that served to confine groups of people, whether willingly or otherwise. Philadelphia’s other public health institutions, notably the Pennsylvania Hospital, mirrored the Lazaretto’s hybridity as a carceral space, existing at the margins of society but nevertheless central to it.
Poor House Hospital in early August. In the late 1820s, physicians still cited irreconcilable differences between miasmatic and contagion theories as a source of much tension in the medical community. University of Pennsylvania medical student Robert Woodruff wrote decisively in his 1829 dissertation on yellow fever that “it cannot have both a miasmatic and a contagious origin.” Contagion was “the tout ensemble in the production of its own disease.” In defense of his belief in yellow fever’s noncontagious nature, Woodruff offered a thought experiment: “A malignant volatile contagion, attacking the same individual repeatedly! The existence of a being endowed with such exterminating weapons is incompatible with the continuance of the human race.”

In his dissertation, Woodruff wrote that “the unacclimated and consequently unassimilated has a double agency to contend against, and his [sic] system, debilitated and excited by the influence of a foreign climate, would be unable to resist the power of a stimulus altogether inefficient in the native, and become very morbidly affected by a force incapable of aggravated effects in the latter.” Referencing “[t]he exemption of the French refugees” during Philadelphia’s 1793 yellow fever epidemic, Woodruff commented that “the importation of those who have been accustomed to a similar or worse atmosphere is perfectly harmless and never followed by the appearance of the

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disease among them.” That said, according to Woodruff, yellow fever “is known to attack the same individual repeatedly and must attack whenever he is exposed to the agency of the circumstances whose concurrence is a sine qua non to its epidemic prevalence.” In this way, yellow fever differed from, say, smallpox, in that the former did not, Woodruff contended, confer immunity on its survivors. Rather, “[t]he relative unsusceptibility” of survivors of yellow fever “is a mere circumstance; consisting only in the reduction of the high, inflammatory diathesis common to all those who are full of vigour and health”; the same effect could be achieved just as well “by an attack of any other disease, or a course of depleting remedies, or by exposure to any debilitating operation, as by having gone through a fit of yellow fever.” Depleting remedies not only assisted in treating yellow fever, they were one of the sources of resistance to future attacks of the disease.

The fact that, under certain circumstances, a person could resist yellow fever’s morbific influence indicated to Woodruff that yellow fever was not in any way contagious. But as the threat of yellow fever in the North faded into the past, physicians on opposing sides of the contagion debate could at least pretend at cordiality. For instance, in an 1828 letter to Philadelphia physician René La Roche, the Italian physician Gaetano Palloni assured La Roche that “[t]he differences of opinion on this disease do not diminish in any way the great esteem that I have for you.” By the time of Palloni’s

200 Ibid., 27, 34.
201 Ibid., 28-29.
202 Gaetano Palloni, letter to René La Roche, March 20, 1828, Rene La Roche Papers, box 2, MSS 2/186, Historical Medical Library, College of Physicians of Philadelphia,
letter, yellow fever was no longer a primary public health concern in Philadelphia or Europe—though it remained very much so in the southern United States and other areas—and debates about its transmission and origin had become less unabashedly antagonistic. As Palloni penned his letter to La Roche, a terrifying new disease loomed on the horizon, inching its way ever closer to the cities of Europe. Cholera was coming.


203 Some physicians, notably John Hastings, adopted a more pessimistic stance, ever fearful of yellow fever’s return to the North. Hastings observed that “the march of epidemics is capricious and well nigh incomprehensible, and a return of it is quite possible.” See John Hastings, Lectures on Yellow Fever, Its Causes, Pathology & Treatment (Philadelphia, Pa.: Lindsay & Blakiston, 1848), 20.
CHAPTER TWO

“A Quick Deciding Plague”: Intimacy in the Time of Cholera, 1817-1834

Cholera is, of course, a horrific disease. But from the perspective of nineteenth-century Philadelphians, it was also an unusual disease, compared to previous epidemics. The very novelty of cholera posed new public health concerns. Was the disease contagious, and if so, what practices should one use to care for the sick? Following certain protocols of hygiene, health, and morality could protect one from cholera, but not always reliably so. It could strike whole populations at once, yet sometimes spared entire streets. Nor could its geographic progression be easily foreseen. And while some populations seemed particularly vulnerable—the poor, the “degraded,” the “intemperate,” and, above all, the Black, each group a part of a kind of choleraic underclass—cholera could strike down anyone. As a disease, cholera affected the entire body, figuratively as well as literally. As an epidemic, it affected, at least potentially, the entire population.

As laypersons and physicians made sense of the unfamiliar disease, they relied on their understandings of similar diarrheal ailments and the kinds of intimate care practices customarily used to treat them. For laypersons, this meant that cholera was highly contagious. Physicians, for whom contagion was more or less synonymous with direct

physical contact, almost unanimously disagreed. There were, in other words, no doctrinal barriers to intimate contact between physicians and cholera patients. But the divergence between lay and professional support of the doctrine of contagion was symptomatic of a growing power differential between physicians and patients, as the former sought to exercise authority over the treatment of the latter. In certain cases, patients could and did resist treatments they found disagreeable, but by and large the story of early-nineteenth-century medicine was one of patient acquiescence to physician authority. Historian of medicine Malcolm Nicolson has shown how “the intensity of physical examination which was routinely accepted by patients greatly increased” in the nineteenth century. Indeed, treatment of cholera patients was suffused with intimacy, due to the kinds of care that the disease required in the understandings of nineteenth-century physicians. This factor, combined with the challenge to physician authority that cholera posed, placed physicians in a precarious position, which they reconciled by adopting a clinical gaze. Some portions of this chapter contain graphic discussions of cholera cases, which are included not for shock value, but to better capture both patient and physician experiences of the disease.

205 The beliefs of physicians and patients diverged in other important ways. For example, many nineteenth-century physicians—including Benjamin Rush—advocated for the beneficial effects of pain, and thus opposed experimentation with anaesthetics. On the other hand, “patients sought out pain relief rather than suffer due to circumstances and predestinations they could not understand.” See Rachel Meyer and Sukumar P. Desai, “Accepting Pain Over Comfort: Resistance to the Use of Anesthesia in the Mid-19th Century,” Journal of Anesthesia History 1, no. 1 (2015): 118.

Nineteenth-century observers could not have known the ways that *Vibrio cholerae* differed from, for instance, *Rickettsia prowazekii* (epidemic typhus) and the yellow fever virus, both of which spread through an insect vector—body lice in the case of typhus, and mosquitos in the case of yellow fever. But they could, and did, detect differences, both in symptoms and in the pathways of each disease’s spread. While cholera was a new disease in North America, many physicians reverted to well-established humoral practices in treating it. The name “cholera” itself hearkened back to humoral conceptions of the body and disease, as the term was derived from “choler,” another name for yellow bile, one of the four humors of humoral theory. As such, to treat epidemic cholera physicians fell back on what they knew about other diarrheal diseases. They used opiates, calomel, and camphor; purgatives, emetics, and bleeding. They also used other forms of intimate care practices like bathing and rubbing patients. These practices were grounded in and intensified physical and sensory intimacy between patient and caregiver. The use of intimate care practices during the 1832 cholera epidemic in Philadelphia revealed the strength of faith in the effectiveness of such practices and did much to normalize coercive intimacy within institutional settings. Physicians of the time lamented “the little power which our remedial agents possess of opposing this disease,” as well as “the necessity of constantly varying the means employed, and the degree of activity in their use.”

The 1832 cholera outbreak transformed what it meant to be a doctor in the United States. That is to say, cholera disrupted the project of medical professionalization, while

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simultaneously galvanizing and redirecting it. But in doing so it threatened to disrupt the early nineteenth century’s still emergent physician-patient hierarchy. In that sense, then, cholera also transformed what it meant to be a patient; cholera provoked shifts in the relationship between patients and physicians. As patients labored under the unfamiliar disease, physicians experimentally performed both old and new forms of intimate care, keenly noting pre- and post-mortem observations in an effort to better understand the disease and its impact on human anatomy.

Meanwhile, therapeutic inefficacy worked to undermine the professional identity of physicians. As historian John Harley Warner has written, “[t]he antebellum American physician derived his professional identity from practice, in which a primary imperative was to act therapeutically.” The presence of conditions of coercive intimacy in cholera care was symptomatic of physicians’ responses to the threats the disease posed to their claims to authority. In other words, as the 1832 epidemic’s quick and fatal action undermined their burgeoning status, mainstream physicians turned to established practices, grounded in intimacy and supported by humoral theory, to bolster their

208 Altschuler, *The Medical Imagination*, 86. Cholera disrupted the medical profession in other ways, too. For example, James Poskett has shown that, “[i]n Europe, the cholera pandemic of the early 1830s significantly disrupted the cross-circulation of journals between phrenological societies across the Continent.” See James Poskett, *Materials of the Mind: Phrenology, Race, and the Global History of Science, 1815-1920* (Chicago, Ill.: University of Chicago Press, 2019), 153.

credibility. Whatever the treatment, it had to be administered speedily, because cholera was “a quick deciding plague.” But what was it?

Technically, the term *cholera* can be used to refer to a cluster of gastrointestinal diseases of varying severity. Here it is used as shorthand for the disease sometimes called the epidemic, Asiatic, Indian, spasmodic, or malignant cholera, in contrast to cholera morbus (gastroenteritis) and cholera infantum. Caused by a Gram-negative (and thus highly resilient) bacterium called *Vibrio cholerae*, cholera is transmitted through the fecal-oral route—through food or water contaminated by patients’ feces—meaning that unlike yellow fever and typhus, cholera spreads without an insect vector. While often grave in its manifestation, the severity of the illness depends in part on the serogroup and biotype of *V. cholerae* responsible for a given infection. On occasion, historians have erroneously conflated cholera and cholera morbus. Cholera morbus itself can result from a variety of different viral and bacterial pathogens, often foodborne. Nineteenth-century Americans attributed cholera morbus to an equally varied assortment of causes, including “[e]xposure to sudden changes of weather,—not wearing flannel,—unripe fruit,—acrid matters of any kind in the bowels,—cold moist air, &c.,” and noted that


“[c]hange of water is very apt to produce some little disturbance in the bowels.”

Cholera infantum—“the scourge of childhood”—referred to diarrhea and vomiting found in babies and young children during the summer months and was essentially the childhood equivalent of cholera morbus. Physicians of the nineteenth century, like Massachusetts physician and author A. I. Cummings, often blamed the disease on over-affectionate mothers who overfed their children; such a mother “does not realize that she is killing her child with kindness!” A mother’s foolish devotion, the common wisdom went, could spell disaster for her children’s health.

Some historians have shown how, at least at first, physicians and laypersons saw the epidemic cholera as merely a deadlier iteration of the standard cholera morbus. In some ways, this was true. The Medical Society of Philadelphia reminded the Board of Health “that Cholera is a disease to which, during the summer and autumnal months, our city is, every year, more or less subject.” No doubt this message was somewhat reassuring. Physicians John Bell and Francis Condie observed, rather less cheerfully, that


214 A. I. Cummings, “Cholera Infantum,” The Boston Medical and Surgical Journal, vol. 45, no. 17 (26 Nov. 1851): 341. Interestingly, the following year Cummings would write that “[i]n our infancy this holy fire [love], in the bosom of a mother, causes the affectionate care, the untiring watchfulness, the anxious solicitude, and the unwearied devotion, that is ever manifested for our welfare,” indicating that a mother’s devoted love could actually protect a child’s health. See A. I. Cummings, The Lady’s Present: Or, Beauties of Female Character (Boston, Mass.: J. Buffum, 1852), 113.

215 As historian of medicine Christopher Hamlin argues: “Before 1840 the new cholera was accidentally Indian, a version of the universal cholera morbus, which just happened to strike India first on its way around the world.” See Hamlin, Cholera, 35.

malignant cholera “differ[ed] in no respect from the endemic cholera of the United States and the Canadas, save that it is now an epidemic.” But in other cases physicians distinguished between cholera morbus and epidemic or Asiatic cholera. When tabulating cases of illness and death in Philadelphia Prison for the year 1832, the Philadelphia Society for Alleviating the Miseries of Public Prisons separated the lone case of epidemic cholera from the twenty-three cases of cholera morbus. Philadelphia’s *Cholera Gazette* described “the prevailing disease” as “essentially epidemic,” by which they meant a new disease affecting a large group of people in rapid succession. Other physicians differentiated between the two diseases based on their cause. Southern-born physician Charles Caldwell attributed “the cholera of India,” as well as yellow fever, to malaria—that is, miasma produced by the “exhalations” of dead organic matter. According to Caldwell, malaria manifested as a bilious fever, and was “a poison of greater power than the matter of small-pox, or any other febrile miasm,” and “is not infrequently a cause of madness,” hence the “deep and humiliating degeneracy of the race” in marshy or swampy areas.

219 The *Cholera Gazette* vol. 1, no. 4 (Philadelphia, Pa.: Carey & Lea, 1 Aug 1832), 56.
220 Charles Caldwell, *An Essay upon the Nature and Sources of the Malaria or Noxious Miasma, from Which Originate the Family of Diseases Usually Known by the Denomination of Bilious Diseases*, (Philadelphia, Pa.: Carey & Lea, 1831), 12-13. Degeneracy was a favorite topic of Caldwell’s. A few years later he penned *Thoughts on the Spirit of Improvement, the Selection of Its Objects, and Its Proper Direction*, an appallingly racist text even by nineteenth-century standards. Given as an address to the Agatheridian and Erosophian Societies, two literary fraternities, Caldwell himself had to admit that his topic was “not of an aspect altogether literary,” but assured his audience
To Caldwell, epidemic cholera and cholera morbus were as different as night and day (or Black and white). But whether physicians and laypersons differentiated between the two diseases is something of a moot point. As an epidemic, cholera presented a series of conundrums that previous epidemics had not. Though exhibiting a preference for port towns, cholera popped up unpredictably; nowhere appeared to be exempt. This was not the case for yellow fever, which only struck seaports. Furthermore, only a weak correlation between cholera and the weather existed; the College of Physicians concluded that, “of all the atmospheric phenomena, which have been alleged to accompany the disease, none are universally present, except those which indicate a diminution in the density of the air, and a tendency to rain and storms.” And while poorer people seemed more prone to contracting the disease than others, improper and unhealthful habits could have been the cause of the disease, none are universally present, except those which indicate a diminution in the density of the air, and a tendency to rain and storms.221 And while poorer people seemed more prone to contracting the disease than others, improper and unhealthful habits could that it “would seem to constitute no unsuitable theme for an academical discourse, especially under the existing circumstances of our country,” during an era when “the note of improvement falls on the ear.” Caldwell asserted that, “[w]hen we take a survey of the different tribes and nations of the earth, or rather of the varieties of man that compose them, we find them not only actuated by different degrees of the Spirit of Improvement, but possessed of very different capacities to improve.” Chief among the less immoveable races Caldwell listed “the Mongolian, Malayan, African, and North American Indian races,” and in particular “the African varieties, especially the Caffres, Boschsemen, and Papuans.” The passage of centuries meant little to these groups, according to Caldwell, “and the latest period finds them as barbarous and savage as the earliest.” Departing from mainstream nineteenth-century racism, Caldwell denied the possibility of improvement through education or civilization, calling such a “hypothesis … unsustainable.” He imagined a time in the distant past, “when the Caucasians were as uneducated, and as destitute of all the resources of art, as the Africans or Mongolians,” and rhetorically asked his audience: “Whence then did they derive their education? and how did they become civilized, and possessed of their means of enjoyment and power?” The answer was clear to Caldwell: through the Spirit of Improvement. See Charles Caldwell, Thoughts on the Spirit of Improvement, the Selection of Its Objects, and Its Proper Direction (Nashville, Tenn.: S. Nye and Co., 1835), 3, 4, 13. 221 Report of the College of Physicians of Philadelphia, to the Board of Health, on Epidemic Cholera (Philadelphia, Pa.: DeSilver, 1832), 12.
jeopardize anyone’s health, regardless of class. But this meant that temperance and hygiene protected one from cholera, at least partially, and cleanliness was theoretically within reach for anyone. Furthermore, one could theoretically only contract cholera from a sick person if one was “predisposed” to the disease, if at all; most physicians assumed cholera could not be transmitted from person to person under any circumstances. This belief informed the forms of intimate care physicians provided to patients, reassuring most physicians that they could safely minister to the needs of cholera patients without fear of contracting the deadly disease themselves.

In the spring of 1832, the Medical Society of Philadelphia established a special committee “to investigate the subject of Cholera,” for the benefit of medical professionals. Comprising seven prominent physicians from the city, the committee attempted to define the new ailment:

Presenting many of the features of ordinary Cholera Morbus, it has still some symptoms superadded, which distinguish it from that disease. The chief of these latter are, the suddenness of the onset, and the rapidity of its course; the extreme exhaustion of the animal powers; the distressing cramps or spasms of the muscles of the limbs

222 The American Gentleman’s Medical Pocket-Book, 165-166.
223 Kathleen M. Brown, Foul Bodies, 291-292.
Cholera was clearly an unfamiliar threat for which American physicians needed to prepare themselves. But in some ways, the report of the Medical Society committee was good news: caregivers could draw on their own experience with cholera morbus and look across the ocean for guidance as they treated cholera patients. Cholera’s initial symptoms included indigestion, nausea, vomiting, loss or irregularity of appetite, diarrhea, upset stomach, white-furred tongue, and feelings of heat and fullness in the stomach, though these symptoms appeared to vary based on the patient’s temperament and other factors. Those of a “sanguine temperament” exhibited “inflammatory” symptoms: “The pulse is often full, the thirst is urgent, nausea, vomiting and purging are more frequent,” without the “excruciating spasms of the stomach and bowels, neuralgic pains in the limbs and the body,” etc., of those patients with a “nervous temperament.” These early symptoms indicated what physician Samuel Jackson and others called “cholerine,” which we might think of as pre-cholera. Hugh Hodge, who served as one of Philadelphia’s cholera doctors, observed that cholerine patients presented, somewhat paradoxically, as “paler, but of a darker hue than natural,” with breath “less warm than natural.”

Hodge’s preoccupation the “natural” versus the unnatural stemmed from his understanding of how disease worked. Hodge was quick to dismiss what French physician François-Joseph-Victor Broussais called ontology—“that is, … the idea that

225 Report of the Committee of the Medical Society 5, 6.
disease is an *entity*—a being—something added to the system.” Rather, Hodge argued, “disease is virtually disorder, an alteration of the natural state or actions of the tissues or organs of the economy.” Hodge followed French histologist Marie François Xavier Bichat’s theory of vitalism—that is, the division of vital phenomena into organic and animal life. Organic life was precisely that—the life inherent in organs. All living things had organic life, but animals also possessed animal life. Hodge explained: “The phenomena of animal life depend solely on the cerebro-spinal system of nerves; those of organic life on the vascular system, (perhaps on the ganglionic system of nerves;) hence every part of the body, not excepting the brain and nerves, is the subject of organic life and its peculiar diseases, while the brain and its dependencies alone manifest the disorders of animal life.” Cholerine, like any disease, disrupted the natural functioning of these systems, and as the disease progressed into cholera proper these symptoms became more severe. During these later stages the abdomen became sensitive, the “tongue and general surface cold,” and patients spoke with “a huskiness or peculiar hoarse whispering tone of voice.”

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228 Ibid., 5.
231 Samuel Jackson, “Personal Observations,” 310.
What Samuel Jackson saw as particularly frightening about cholera was its sphere of influence, not just geographically, but within an individual body. Cholera was like a scald that covered the entire skin: it affected first and foremost the alimentary organs, which Jackson likened in surface area to the skin itself. The alimentary organs were linked to the bronchial organs, as well as the cerebro-spinal and ganglionic nervous systems so important in Bichat’s theory of vitalism. One patient told Jackson that “he felt as though[h] his whole body was coming through his bowels.” Cholera was “gastritis, duodenitis, enteritis, and colitis,” Jackson wrote, “at one and the same moment.” But it was more dangerous than each of “those affectations” taken alone. Disturbing as it did the entire digestive system at once—and, by extension, the lungs, brain, and spine—cholera took over the patient’s body. To wrest control of the body back to the patient required the utmost diligence of the caregiver, as well as a willingness to immerse oneself in the patient’s effluvia. This was true of other diseases—think of Isaac Cathrall’s experiments with the black vomit of yellow fever: assessing its taste, its consistency, its appearance—but what differed from earlier diseases was the sheer amount of bodily fluids shed by cholera patients, as well as the quick-acting fatality of the disease itself. Caregivers exposed themselves, to a greater extent than before, to their patients’ bodily fluids. In doing so, they risked contracting the disease themselves, though most physicians (if not laypersons) would have denied this.

To a person steeped in the religious revivalism of the Second Great Awakening, cholera evoked holy terror. The worldlier accounts written by some physicians read more like body horror. Of patients’ diarrhea, abolitionist physician Hiram Corson remarked “I speak of it as gallons. Dr. Jackson said he had seen bucketfuls discharged in a few hours from the bowels alone.” Such observations speak to the “morbid fascination” that Philadelphians had with cholera. Cholera was—and is—a terrifying disease to behold. The patient’s skin became puckered, their face sunken, their skin blueish and corpseslike, and they spoke with a “[s]epulchral voice,” almost acquiring the countenance of a mummy—the “symptoms of death,” in the words of one physician. If not promptly and properly treated—which in the nineteenth century could mean a number of things, including giving the patient enemas, rubbing the patient’s extremities or applying mustard plasters to them, administering doses of calomel and laudanum, et cetera—death could ensue in a matter of hours. All the while, the patient vomited...


235 Literary scholar Erin O’Connor has argued that, “[i]n the minds of physicians and social commentators alike, the choleraic body and the city were coextensive, systems of ducts and drains that were run together by the turbid diarrhea of the cholera victim himself.” O’Connor explained that “cholera stopped up veins (tacky, dried-up blood could not flow), opened unsightly drains (oozing from the pores was a characteristic sign of collapse), and turned mouth and anus into a veritable waterworks,” all of which heightened the body horror component of cholera. See Erin O’Connor, *Raw Material: Producing Pathology in Victorian Culture* (Durham, N.C.: Duke University Press, 2000), 40.


237 Osborne 30.
profusely and expelled gallons of “rice-water” diarrhea, and an excruciating thirst
overcame them—sometimes treated by drinking rice water, in an apparently deliberate
attempt to replace lost fluids with fluids of a similar consistency. Through all this,
physicians sometimes remarked, the patient remained more or less lucid. One cholera
physician reported that one of his patients “[c]onverses cheerfully,” and while some were
“slightly giddy,” others were “perfectly rational.”

In his *Reminiscences of the Cholera Epidemic of 1832*, Corson recalled the story
of “Samuel Summers, a strong young man, accustomed to work for the farmers, after
working all day September 5, went to a ‘watermelon party,’ and stayed till midnight,
dancing occasionally.” Summers fell sick with cholera the next day and died. His
behavior was a perfect storm of poor choices, according to Corson: “It was just such
imprudence as this—indulgence in watermelons, and loss of a night’s sleep—that brought
on many cases.” Whether Summers actually died from cholera morbus or from
epidemic cholera can never be confirmed with complete certainty. He may well have
fallen ill with an extremely severe case of gastroenteritis. But Corson confidently
identified him as a victim of the cholera epidemic. When it came to the task of assessing

238 William E. Horner, “Case Book: August 1832,” 10a 355, Historical Medical Library,
College of Physicians of Philadelphia, Philadelphia, Pa. [Henceforth: Hospital #3
Records], 33, 34, 39, 47.

239 Corson 5-6. According to historian William Black, “many whites linked what they
regarded as an unhealthy habit—African Americans’ excessive consumption of
watermelon—to disease and death, namely from cholera. (It was a common belief,”
Black explained, “that eating too much watermelon, especially when it was overripe,
could lead to cholera, and many cities banned the fruit’s sale during cholera epidemics.)”
of a Racist Trope,” *Journal of the Civil War Era* 8, no. 1 (Mar 2018): 76. However, Black
also noted that “the fruit was not associated with African Americans until after
emancipation.” See Black 64.
the epidemic’s scope, Corson’s status as a medical professional gave him, for better or worse, the authority to do the counting.240

While laypersons “espoused contagion as the cause of the disease’s epidemic spread across Europe and America,” physicians believed cholera was not contagious.241 As evidence of cholera’s noncontagious nature, the College of Physicians pointed to the disease’s seemingly random geographical progression. They were baffled, they told the Board of Health, as to how and why cholera popped up where it did. Why, they asked, did cholera break out “in the heart of Paris,” before any other part of France suffered from the disease’s ravages?242 True, Paris was the French capital of filth and vice, and cholera was bound to rage there, but how did it get there while bypassing the French countryside? The problem was that cholera did not conform to nineteenth-century notions of how contagious diseases spread.243 Since cholera spreads through the fecal-oral route, it can be—but is not usually—transmitted directly from one person to another, and is usually communicated by contaminated water reservoirs. This made the disease’s spread appear both less predictable and not limited to physical contact, and hence made cholera itself appear noncontagious.

As always, there were exceptions to the general professional consensus of cholera’s noncontagious nature. Historian Peter Baldwin has demonstrated that public health authorities across much of Europe generally supposed cholera to be directly

240 See *Cell Count* 11.
241 Osborne 31.
243 Osborne 31.
transmissible from person to person. It was, after all, the safer bet; these measures were
“little more than the application of lessons learnt from past attacks of pestilential
disease.”

Other writers shared this precautionary position. In their 1835 *Histoire du Choléra-Morbus Asiaticque*, the French historians Augustin Fabre and Fortuné Chailan wrote that “Indian cholera has the peculiar and essential character of contagious diseases,
and differs essentially from epidemic diseases.” They explained that “[a] disease that is
imported from an infected country into a healthy country is obviously contagious”—no
other explanation sufficed. While Fabre and Chailan acknowledged that exposure to
infected persons did not necessarily result in the contraction of cholera, they explained
that “[t]he transmission of contagious diseases is not inevitable and absolute,” and “[t]he
contagion can only reach those who by their predisposition are prepared to receive it.”

Though they considered it a unique subtype of cholera morbus, Fabre and Chailan
refused to classify the Asiatic cholera as an epidemic. They defined an epidemic as a
widespread disease with “a known local cause”—namely, “the insalubrity of things
necessary for our existence,” like air, water, and food—and which “must necessarily
come to an end with the cessation of [its] original causes.”

In this sense, Fabre and Chailan would have agreed with the author of *The American Gentleman’s Medical*

244 Peter Baldwin, *Contagion and the State in Europe, 1830-1930* (Cambridge, U.K.: 
Cambridge University Press, 1999), 40, 123.

245 Fabre and Chailan 449-450, 453, 460, 461. Original text: « le choléra indien a le
caractère propre et essentiel des maladies contagieuses, et qu’il diffère essentiellement
des maladies épidémiques. » ; « Une maladie qui est importée d’un pays infecté dans un
pays sain est évidemment contagieuse. » ; « La transmission des maladies contagieuses
n’est pas inévitable et absolue » ; « La contagion ne peut atteindre que ceux qui par leur
prédisposition sont préparés à la recevoir » ; « une cause locale et connue » ;
« l’insalubrité des choses nécessairement avec la cessation de leurs causes originelles. »
Translation by author.
Pocket-Book, and Health-Adviser, who informed readers that epidemics are “evidently dependent upon a morbid change in the condition of the atmosphere,” though this author included cholera among the ranks of epidemic diseases.246

Jesse Torrey, Jr., a student of Caspar Wistar, offered a rather more colorful explanation for cholera’s transmission. Torrey identified cholera as “not being contagious (unless partially).” He attributed the disease to “a peculiar venomous species of prolific invisible insects, generated in putridity, and reproducing it in succession, wherever they find their proper aliment, and predisposed human victims”—namely, “[t]he votaries of vice, dissipation, luxury, and sensual pleasure.” As proof of his theory he remarked that “[s]ince the arrival of the Cholera here, very small red insects have several times exhibited themselves on my paper, upon which I was writing.” 247 Torrey’s hypothesis, though erroneous, predated by sixteen years the proposal of southern physician and scientific racist Josiah Nott that yellow fever spread through insect vectors.248 Since they

246 The American Gentleman’s Medical Pocket-Book, 164.
247 Torrey, A Dissertation, 11, 12, 66, 75.
248 Josiah C. Nott, “Yellow Fever contrasted with Bilious Fever—Reasons for believing it a disease sui generis—Its mode of Propagation—Remote Cause—Probable insect or animalcircular origin, &c.,” The New Orleans Medical and Surgical Journal 4, no. 5 (March 1848): 563-601. Nott and Torrey were both University of Pennsylvania alumni who hypothesized insect vectors as a source of disease, but the similarities between them end there. Nott was a southern slaveholder and a major proponent of the theory of polygenism. In other words, like Caldwell, Nott considered the races to be distinct species, created separately by God and meant to occupy a certain preordained province. Torrey, on the other hand, became something of an abolitionist. Born near Albany in 1787, Torrey traveled throughout the South as a young man, documenting the horrific scenes of slavery that he met along the way. See Jesse Torrey, Jr., A Portraiture of Domestic Slavery, in the United States: With Reflections on the Practicability of Restoring the Moral Rights of the Slave, Without Impairing the Legal Privileges of the Possessor; and a Project of a Colonial Asylum for Free Persons of Colour: Including
were “generated in putridity,” Torrey’s mysterious insects infested the filthiest parts of Philadelphia, rendering those areas more vulnerable to cholera. However, these insects could travel to healthier parts of town—to Torrey’s own home, even—and, terrifyingly enough, perhaps bring cholera with them.

As with yellow fever, Jackson linked the spread of cholera to “fear, grief, and despair” as “moral exciting causes” of the disease, in addition to other exciting causes such as “unwholesome effluvia.”249 The College of Physicians concurred in this regard: “Among the causes of Cholera, none are more fatally operative than a depressed, anxious state of mind. … That many died of fright was generally an accredited opinion at St. Petersburgh, during the prevalence of the disease in that city,” and one cholera physician noted that one of his patients, a white woman named Mary Lee, was “much alarmed” during her illness.250 Indeed, the prominent Philadelphia Quaker Deborah Norris Logan remarked in her diary that “[t]he People in Philadelphia are very much frightened, and as contagion is too apparent to be doubted I wonder still more of its inhabitants do not leave the city.” Like many laypersons, Logan readily accepted cholera as a contagious affliction. When “young Dr Davis” died, she speculated that he had fallen ill from “attending the sick Rail-roaders” who had died from cholera a few days earlier, while working on the Philadelphia and Columbia Railroad at Duff’s Cut, in Chester County.251 The plight of the Irish rail workers at Duff’s Cut remains perhaps one of the better


249 Samuel Jackson, “Personal Observations,” 300.

250 *Report of the College of Physicians* 25; Hospital #3 Records 27.

251 Diary of Deborah Norris Logan, vol. 14, 4 Aug 1832, 30 Aug 1832.
known episodes from the 1832 cholera epidemic. Fifty-seven Irish immigrants perished of the disease at Duffy’s Cut, including at least one woman. Torrey foresaw that “[t]he introduction of Rail Roads, will soon remove the necessity of locating even commercial towns, on the foggy banks of rivers,” concluding optimistically that the future might be free of effluvia-borne diseases—but first the railroads had to be built, and by immigrant labor nonetheless. 252 When cholera struck the Duffy’s Cut labor camp, locals, whose anti-Irish sentiments were heightened by their fear of falling ill themselves, rebuffed the workers’ pleas for assistance; only the Sisters of Charity—and, apparently, young Dr. Davis—ignored the risks and ministered to the victims’ medical needs. 253

Fear of contagion loomed large in the minds of laypersons like Logan. As “Old Dr Martin” attended “with great kindness” to one of Logan’s acquaintances who was sick with cholera, she fretted for the doctor’s health: “I hope he will escape it.” 254 However, the College of Physicians reassured the Board of Health that “[t]here has not been found any appreciable connexion between the full and frequent intercourse of physicians, nurses, attendants, and friends, with the sick of Cholera, and the number of the former who have been attacked with the disease.” As evidence of their claim, the College reported:

The women who washed the clothes of the patients in the hospital at Orenberg, were entirely exempt from the disease. A like immunity was enjoyed by the attendants

252 Torrey, A Dissertation, 33.


who helped the patients in and out of the bath, rubbed their bodies, dressed blisters, &c. in different Russian and other hospitals.

The physician general to the town hospital of Dantzig, says, that there were five waiters always near the patients; eight men were employed in rubbing and bathing; nine medical men visited the patients, of whom one was always in the room in the day time, two watching every night; no one of these twenty-two persons fell ill.255

The reports from Orenburg and Danzig, like that of St. Petersburg, came to the attention of the College of Physicians through sources which they did not identify as they studied the progression of cholera throughout Eurasia. Intimacy with cholera patients, unlike intimacy with smallpox patients, appeared to have no bearing on one’s likelihood of contracting the disease. Not just physicians and nurses, but all those who tended to the sick seemed to be strangely immune to the affliction of those in their charge. A special committee of the Medical Society reported “[m]ultiple instances … where one member of a family has been attacked with cholera and died, while the relatives and friends, who nursed the patient, even occupied the same bed at night, and performed the usual offices to the body after death, have remained free from the disease.”256 Cholera was clearly not contagious in the way that smallpox was; had the patients at Orenburg and Danzig been sick with smallpox, contact with their skin and clothes could have had deadly consequences.

However, cholera differed fundamentally from smallpox in a way that nineteenth-century physicians could recognize but not explain: someone could only contract the

256 Report of the Committee of the Medical Society 12.
smallpox virus once, but the same was not true of the cholera bacterium. Sometimes
cholera patients with comparatively mild symptoms appeared to make complete
recoveries before falling ill again days later.\textsuperscript{257} Furthermore, one could be vaccinated
against smallpox; there was no vaccine for cholera until the late nineteenth century, and
even twenty-first-century cholera vaccines do not provide lifelong immunity. Although
nineteenth-century analysts did not know it, cholera also differs from yellow fever and
typhus in that it spreads without an intermediate animal vector—mosquitos in the case of
yellow fever, and body lice in the case of epidemic typhus.

But, since cholera did not follow the rules of contagion, physicians assured the
public and themselves, it must not be contagious.\textsuperscript{258} Because cholera usually spreads
through water, it appeared not to be transmissible from person to person. Thus,
physicians generally denounced quarantine efforts as frivolous, ill-informed, and above
all useless. Of this they earnestly tried to convince public health officials. The College of
Physicians told the Board of Health “that all attempts by insulation and non-intercourse,
by means of sanitary cordons, and the most rigid quarantine, to exclude the disease, have
signally failed in every country and city in Europe, however well devised and skilfully
and energetically executed.”\textsuperscript{259} Such arguments stemmed from the general distaste for

\textsuperscript{257} Joseph Parrish, “Account of Admissions, Results, &c., of Patients at Cholera Hospital
No. 2, July, 1832,” Z10 39, Historical Medical Library, College of Physicians of
Philadelphia, Philadelphia, Pa. [Henceforth: Hospital #2 Records]; Samuel Jackson,
“General Case Book,” (1832), Z10 32, Historical Medical Library, College of Physicians
of Philadelphia, Philadelphia, Pa. [Henceforth: Hospital #5 Records].

\textsuperscript{258} Charles E. Rosenberg, \textit{The Cholera Years: The United States in 1832, 1849, and 1866}

\textsuperscript{259} \textit{Report of the College of Physicians} 5-6.
quarantine that prevailed at the time, a distaste borne in part out of concern for the health of the economy—quarantines stymied mercantile activity in ways intolerable to commercially-minded Americans—and in part out of the historically poor track record of quarantines in general. The Medical Society reported that, in Europe, “all such measures have failed in effecting the grand object for which they were established,” and indeed “[t]he quarantine of persons has proved equally unavailing with that on merchandise.”

Bell and Condie called quarantines not only ineffective but “injurious to the commercial interests of a nation,” and quipped that “a system of absolute non-intercourse with those countries where the disease prevails, would be as ridiculous as it would be unsuccessful,” in part because quarantines in general were destined to fail, and in part because cholera appeared not to follow expected epidemiological laws.

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261 Bell and Condie 51. Given the fear that cholera “should be conveyed to our Western shores, by means of agents, hitherto found too subtle for our strictest quarantine laws, effectually to guard against,” a certain snake-oil salesman by the name of J. Q. Warnes (writing under the brilliantly devised pseudonym of Q. Senraw) advised that “[c]leanliness of person and habitation must be strictly attended to.” Later, having come out as himself, and assuring his readers that “no sinister motive can be attached to me,” Warnes expressed a hope that, “under the blessing of the Supreme Physician,” cholera might be halted in its tracks through the use of his prescribed “Elixir,” made of four parts hollywood, two parts each fennel seeds, jalap root, coriander seeds, elecampane root, and rhubarb, and one part scammony, soaked in “the best French or Spanish brandy” for nine days. Warnes appears to have had some connection, at least informally, to the Spanish Empire. Earlier, Warnes had translated a treatise on intestinal worms by Italian pathologist Valeriano Luigi Brera from English into Spanish, the text having already been translated from Italian to French, and then from French to English. Describing himself as “a stranger, who has adopted this happy country as his own,” he claimed to have received the recipe for his elixir from “a foreign medical gentleman, of much scientific research, who has travelled through the greatest part of Europe, Asia, and both continents of America, including Manilla, for professional purposes.” Warnes informed his readers of other remedies as well, including “one herb called Wild Pimienta found in Vuelta de Arriba, and Vuelta de Abajo, in the island of Cuba.” See: Q Senraw [J. Q. Warnes], “To the Public,” The United States Gazette (Philadelphia, Pa.), 2 Apr 1832,
Physicians and lay observers both paid careful attention to the movement of the disease, as well as where it gravitated toward geographically. Jackson remarked upon “the apparent affinity of epidemic cholera for streams and water-courses,” which “are the especial seats of malaria.” Indeed, it appeared that the earliest affected cities were clustered along the Gangetic Plain. Observers often pinpointed Jashore as the epicenter of the first cholera outbreak, in August of 1817, but the College of Physicians reported to the Board of Health that the disease had raged in Nadia, “Mymuni,” and Dhaka earlier that year, before it reached Jashore. From Jashore it spread through “the tracts bordering the Hoogly and Jellinghy rivers,” reaching Delhi, Mumbai, and Chennai by 1818. In 1820, the disease rapidly spread eastward as far as the Philippines. By 1823, places as far flung as Timor, Damascus, and the Russian city of Astrakhan had become infected. From there, the progression of the disease slowed down until 1829, when other Russian cities began to succumb—Orenburg, then Nizhny Novgorod, Moscow, and Vologda in rapid succession. In 1831 the cities of Central Europe suffered. Warsaw, Riga, Danzig, Prague, Budapest, Vienna, and Hamburg—none escaped cholera. It was in 1831 that cholera first


263 Samuel Jackson, “Personal Observations,” 301.

reached the British Isles, too, striking Sunderland first, before moving on to Newcastle-upon-Tyne, Haddington, Edinburgh, Glasgow, and finally London in early 1832.  

The progressive movement of cholera perplexed physicians; it seemed like cholera could pop up anywhere at any time. In April 1832, cholera “first appeared in the most crowded and filthy part of Paris, though eventually few or no parts of the city appear to have escaped its ravages.” Fabre and Chailan calculated 1,905,984 cholera cases, and 803,070 deaths, across Europe before the disease crossed the Atlantic, for a mortality rate of roughly forty-two percent. On June 8th, cholera reached Quebec, “the first point known where the pestilential or epidemic influence reached our continent, or displayed its effects.” Fabre and Chailan attributed the timing of the Quebec outbreak to the arrival of British ships with infected passengers the week before. Had it not been for impassable ice, they said, the disease might have arrived sooner. By the end of the month, 1,350 Québécois had died. With a population of “about 35,000 souls,” that works out to a death rate of 39 per 1,000. From Quebec it spread “along the St. Lawrence,” and reached Montreal on June 10th. This city, they remarked, “fared much worse,” with

267 Fabre and Chailan 432.
269 Fabre and Chailan 137. Original text: « d’environ 35,000 ames [sic] ». Translation by author.
a death toll more than twice that of Quebec, “so nearly a tenth succumbed to the plague.”

Cholera came to New York on June 24th, where it first appeared in “an old inhabitant of the city,” before attacking four Irish immigrants who had recently arrived in New York from Albany via Quebec. The city’s Bellevue Almshouse suffered a notoriously fatal outbreak, beginning on June 27th with the infection of “an old woman who had been confined to the house for three years.” The outbreak “reached its maximum July 11th, and terminated August 4th.” Samuel Jackson estimated “the whole number of cases” within the walls of Bellevue to be 530, and 298 of them fatal. That a crowded institution like Bellevue witnessed such a deadly eruption of cholera surprised few, if any, New Yorkers. But as cholera leapt unsteadily towards Gotham, preparing the city at large, rather than its carceral institutions, took priority. And yet, the city as a whole still suffered greatly. The Cholera Gazette of Philadelphia reported 460 deaths—324 in hospitals alone—in New York by July 18th, by which point the disease had spread at least as far west as Detroit. In the week before July 25th, 716 out of 887 burials in New York were victims of the cholera epidemic (in addition to six deaths from “ordinary cholera”). Fabre and Chailan counted 3,850 cases, and 1,566 deaths, in July alone, and

273 The Cholera Gazette vol. 1, no. 2, 32.
274 The Cholera Gazette vol. 1 no. 3, 47.
nearly 1,400 additional deaths in August, after which point the disease abated as quickly as it had begun.275

While Quebec and New York suffered greatly, “[a]ll the cities and towns on the sea-board intermediate to these two points … were at this time unaffected with the disease, and with the exception of a very limited number of cases in New Haven, Newport, Providence and Boston, the others have remained entirely exempted from its visitation.”276 Philadelphia was not quite so lucky. Andrew Musgrave of Filbert Street seemed to be Philadelphia’s Patient Zero. In the July 20th, 1832, entry from his diary, Corson noted that cholera “appeared in Philadelphia on the 5th of July, in a man named Musgrave, in Filbert Street, near Schuylkill Third Street [now Twentieth Street], and a few days later two men in a house in Coates Street [now Fairmount Avenue] were attacked.”277 These dates disagree with those reported in Hazard’s Register of Pennsylvania for that year, which gives July 11th for the Filbert Street case and July 16th for the Coates Street cases; the discrepancy in dates might have arisen due to the often frenzied nature of cholera reports, and the prevalence of hearsay news during the epidemic.278 One of the evening papers of The Cholera Gazette reported, of Musgrave, “that no sign was found of any disease worse than lingering and obstinate diarrhoea,”

275 Fabre and Chailan 139.
277 Corson 1, parentheticals in original.
perhaps indicating that at least some physicians might have overdiagnosed cholera.

The epidemic reached its zenith around August 6th, when the Health Office reported 176 new cases. Slightly over half of the reported cases occurred between August 6th and August 14th. The last reported fatality was that of a 64-year-old white woman living on Bank Street, now the portion of 27th Street above South Street, near the Schuylkill River, on September 25th.

It might have seemed like a good idea to flee the city when the epidemic struck, but as the *Cholera Gazette* informed its readers, “such is the character of the present pestilence, that it is impossible to know where to find a spot in which it may not surprise us,” and “the disease is not confined to cities.” Not only did cholera seem random in its trek across the globe, but within a given city it seemed that it could appear anywhere. Jackson noted that cholera differed from yellow fever in that it “was not confined to any one part of the city, but was extended to every portion.” This fueled even well-to-do Philadelphians’ fears that the disease might reach *their* neighborhoods. During the epidemic, the Health Office submitted detailed lists of reported cases to *The Gazette* and *The American Sentinel*, which printed them daily. The cholera reports read like, and perhaps functioned as, a kind of public health offender registry, listing each case’s

279 *The Cholera Gazette* vol. 1 no. 2, 30.
281 *Gazette* (Philadelphia), 2 Aug – 6 Aug 1832; *American Sentinel* 6 Aug – 1 Sep 1832; *Hazard’s Register of Pennsylvania* vol. 10, no. 5, 74; *Hazard’s Register of Pennsylvania* vol. 10, no. 10 (8 Sep 1832), 160.
282 *Hazard’s Register of Pennsylvania* vol. 10, no. 19 (November 10, 1832), 299.
283 *The Cholera Gazette* vol. 1, no. 2, 28.
location with the greatest possible specificity—sometimes a street, sometimes a block, sometimes an address. Those who read the reports would thus know whether a newly infected person lived right around the corner, or was safely tucked away inside an almshouse or prison. Physicians may not have believed cholera to be contagious, but many laypersons certainly did. As in yellow fever outbreaks and other epidemics, laypersons tended to err on the side of contagion in their assumptions about epidemic diseases. Deborah Norris Logan, writing of cholera, remarked with trepidation that she “believe[d] in its powerful contagion,” which weather conditions like heavy rain only served to enhance.285

While every part of Philadelphia experienced cholera, the disease’s spread was highly uneven. The Medical Society’s committee on cholera remarked that cholera “exhibits a striking partiality” for the same kinds of places that suffered most during

285 Diary of Deborah Norris Logan, vol. 14, 8 Aug 1832. In this diary entry, Logan wrote:

It has been a day of considerable anxiety and trouble to me.—My Son went to town—He expected a company of Gentleman [sic] to dine with him on next 4th day [August 15] and some things were wanted from thence on the occasion.—He had hardly gone before it began to rain—And has this afternoon rained a Deluge. Now this would be nothing on ordinary occasions—but the Papers, and the reports of the prevalence of this dreadful disease, has filled my mind with vague apprehensions and fears. I believe in its powerful contagion—and I fear he may be just now on his way home and—He would be displeased if He saw this page—but it is dictated by a mothers [sic] anxiety.

As Charles Rosenberg explained, “[m]ost ordinary folk believed that the disease was spread by some specific contagion. Despite the soothing words of physicians, it was almost impossible to rent even the meanest sort of building for use as a cholera hospital. It was equally difficult to hire nurses to work in them.” See Rosenberg, The Cholera Years, 37, 81.
yellow fever epidemics—that is, “low, damp, and marshy situations”—reinforcing the
date between dampness and disease. Both Moyamensing, a neighboring township with a
relatively large concentration of African Americans, suffered disproportionately during
the epidemic, at a rate over four times higher than Philadelphia proper. Both
Southwark and Moyamensing were regarded as unhealthy regions, and “especially in
their narrow lanes and alleys, reside some of the worst of our population as to habits of
life,” according to Samuel Jackson. On the other hand, rural areas like Passyunk and
West Philadelphia nearly escaped the disease altogether; all but a handful of the West
Philadelphia cases occurred in the Blockley Almshouse. Philadelphians of the time
considered West Philadelphia a particularly healthful area, removed as it was from the
urban filth of the city proper. While the streets closest to the Schuylkill River were
predominantly working class, several wealthy Philadelphians had homes in the further
west portions of West Philadelphia. Beginning in 1831, horse-drawn omnibuses turned
Philadelphia into a city of commuters. As a result, when cholera reached Philadelphia, the
city had just begun its transformation from a “walking city” into a sprawling
agglomeration.

286 Report of the Committee of the Medical Society 8.
287 Of Moyamensing’s 6,822 residents, 389 cases of cholera were reported (57.02 per
thousand), compared to 1,094 cases out of Philadelphia’s 80,458 residents (13.60 per
thousand). Data on cholera cases collected from Gazette, American Sentinel, and
Hazard’s Register of Pennsylvania. Data on population from Samuel Jackson, “Personal
Observations,” 292. Moyamensing was incorporated into Philadelphia in 1854.
288 Samuel Jackson, “Personal Observations.” 293.
289 Margaret S. Marsh, Suburban Lives (New Brunswick, N.J.: Rutgers University Press,
1990) 91.
290 The idea of “walking cities” dates at least to Sam Bass Warner, The Private City:
Philadelphia in Three Periods of Its Growth (Philadelphia, Pa.: University of

291 *The Cholera Gazette* vol. 1, no. 4, 63.

292 Historian Deirdre Cooper Owens described the relationship between slavery and medicine as “synergistic.” See Deirdre Cooper Owens, *Medical Bondage: Race, Gender, and the Origins of American Gynecology* (Athens, Ga.: University of Georgia Press, 2017), 3. According to historian Marli Weiner, “[a]s slaveholders became ever more anxious about defending the peculiar institution on which they depended, southern doctors’ claims of scientific authority sometimes took the form of providing anatomical and physiological arguments to support it.” See Weiner 3.
race in an effort to justify slavery, using devices like the spirometer (which measured lung capacity) in an attempt to rationalize their racist convictions. According to Cartwright, Black persons’ lungs could not properly oxygenate the blood, a deficit for which he believed slave labor was the only remedy.293

When it came to disease prevention, Charles Caldwell placed much of the onus on individuals: “Is personal cleanliness the object in view? By water, soap, and towels it is easily compassed. And in the removal of the causes of disease, and the general maintenance of health, it is a measure of much more importance than it is commonly supposed to be.” Caldwell complained that, “neglectful of health, as individuals are, public bodies are still more so.” He summarized the entire history of public health in one sentence: “Quarantine establishments founded in error, and ill-contrived schemes for purifying cities excepted—both of which, as now conducted, do more harm than good—it is not within my recollection, that States have devised and put in practice any measures of moment for the preservation of public health.” Even smallpox vaccinations, done by individuals rather than public bodies, did “not amount to the preservation of health,” but “only the substitution of one disease for another—a less evil for a greater”—that is, malaria. In other words, malarial diseases rushed in to fill the epidemiological vacuum.

left by smallpox vaccination. Even so, Caldwell had to admit that smallpox vaccinations amounted to “a deduction from the sum of human misery,” and acknowledged that vaccination “mitigates small-pox, if it does not always prevent it.”

Public health endeavors were not always, strictly speaking, “public” in origin. We have already seen this during the earlier yellow fever epidemics. By the time cholera came to Philadelphia, the foundations of public health initiatives had begun to change. In 1832, the city’s Board of Health, charged with both protecting the city from the introduction of “pestilential diseases” and allaying their effects, had already been in existence for over thirty years. That said, the considerable resentment that had rocked the relationship between public health officials and physicians during the yellow fever epidemics had not yet abated. In an 1828 speech given at a meeting of the Philadelphia Medical Society, John Bell argued that, “[i]n municipal and local regulations and laws, the voice of the physician is heard explaining the best means of preserving the health and consequent comfort of the community.” He looked optimistically to the future “when the value of medicine and its collateral sciences will be so far appreciated by statesmen and governments, as to require that physicians shall be awarded, not merely the subordinate station of agents, but the higher office of counsellors in military and naval

295 As Charles Rosenberg put it, “[u]ntil relatively recent times, leadership during epidemics has come almost invariably from outside established administrative circles.” See Rosenberg, The Cholera Years, 82.
expeditions.” As late as 1845, Francis Condie lamented the ignorance of the Board of Health and its refusal to take the advice of physicians seriously.

During the 1832 cholera epidemic, however, the Board of Health worked closely with the College of Physicians, taking its advice and establishing several provisional hospitals “for the reception of the poor and needy.” The Board took this appeal to heart, at least in theory. In preparation for the epidemic, the local government called for the establishment of over a dozen makeshift cholera hospitals, many of them located in schoolhouses, churches, and carpenter shops. These locations were chosen in part based on their healthful architecture—their airy, open interiors—and in part because it was difficult to find places whose owners and neighbors were willing to house cholera patients. The buildings’ salubrious designs served to lessen the hazards posed by the diseased bodies they would contain, which would have too easily contaminated less well-


298 Condie exclaimed, “[w]here this disregard to the claims of the medical profession exhibited, exclusively, by the uneducated and unreflecting classes of society, it would not excite so much surprise, and would claim our pity rather than our censure:—but we find it exhibited, also, to an alarming extent even by those who make the highest pretensions to elevation of mind, to intellectual knowledge and refinement, and to purity of intention. … There cannot, certainly, be a more legitimate object of legislation, than the protection of the health and life of the citizen from ignorant pretenders to medical science, by whom they are as much, if not more endangered, than by any of those causes against which the existing sanatory laws are directed.” See D. Francis Condie, *Annual Oration Delivered Before the Philadelphia Medical Society, By Appointment* (Philadelphia, Pa.: King and Baird, 1845), 5-10.


300 *Hazard’s Register of Pennsylvania* vol. 10, no. 5, 74-75.
Scattered around Philadelphia and its suburbs, headed by appointed physicians, and staffed with Sisters of Charity, some of these hospitals served scores of patients, while others housed only a few, or none at all.

Of course, impromptu hospitals were of little use to incarcerated Philadelphians, and when cholera struck Arch Street Prison, it did so with full force. Several of the prisoners—including “the most serious offenders”—volunteered to care for the sick. Altruism aside, prison officials added an incentive for the volunteers by agreeing to release, or reduce the sentences of, those willing to help out. In some cases, even Governor George Wolf sweetened the deal: “A robust black man of violent character, confined for an assault for six or nine months, and who was described as getting drunk occasionally, was promised his pardon if he would help out with the dead, which he did. The Governor pardoned him; he was not affected by the disease.” In fact, “none of [the volunteers], we are told, became sick of the cholera, although they were generally intemperate.”

Arch Street was an epidemic waiting to happen. It was inevitable, according to the prison physician, that cholera would rage violently in the prison. Samuel Jackson would have agreed. He lamented that Arch Street and the Almshouse “are noted and striking

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302 Rosenberg, *The Cholera Years*, 81, 95; Gazette; *The American Sentinel*; Hazard’s Register of Pennsylvania.
instances of the deleterious influence on the constitution, flowing from this cause [crowding and poor ventilation], and its coördinance in calling into existence the pestilence in its most malignant and direful aspect.” 304 The lesson learned was to improve the quality of rations, emphasize the importance of cleanliness, and “remov[e] a portion of the prisoners, so as to confine the number within a larger space,” in hopes of “prevent[ing] the same disease from proceeding to the same extent.” Jackson argued that a poor diet excited cholera—hence the sparing of Eastern State, where the rations provided to the prisoners were more wholesome than those at Arch Street or the Almshouse. 305 In fact, only four Eastern State inmates died in 1832, three of whom were Black and one of whom was white. 306

At the time of cholera’s first appearance in Philadelphia, an incipient and growing distinction between physical health and moral health began to take shape among reformers. 307 The two usually went hand in hand, but were no longer necessarily seen as

304 Samuel Jackson, “Personal Observations,” 301.
305 Arch Street Report 9-11.
306 Benjamin H. Coates, On the Effects of Secluded and Gloomy Imprisonment on Individuals of the African Variety of Mankind, in the Production of Disease (Philadelphia, Pa.: John C. Clark, 1843), 89. Thus, the Penitentiary’s differential Black and white mortality rates, while sharply divergent, were deceptive, in the still rather empty penitentiary. The Black mortality rate in 1832 was 13.52 percent, while the white mortality rate was 1.44 percent.
307 Importantly, British historians have noted an opposite process in Britain in the early nineteenth century. Historian Christopher Hamlin has noted that in Britain in the early 1830s, when public health and social justice intersected, “most medical men … navigated very delicately when they approached the borders of their discipline,” even when, for instance, they debated “which aspects of factory work … led to which deteriorations of health and morals: fever, consumption, orthopedic deformities, mental dullness or irrational excitability, precocious sexual activity, depression and demoralization, even suicide.” Hamlin argued that Edwin Chadwick’s Sanitary Report of July 1842 “said little of how physical conditions produced moral effects”; rather, “readers were simply given a
one and the same; poor moral health could result in poor physical health, and vice versa. However, the committee responsible for investigating the 1832 Arch Street outbreak argued that “[c]rimes do originate from the misery, the distresses, and the ignorance of the poor; to be prevented there must be an improvement in their condition and information.” The same could be said of disease. Disease even begat crime, and vice versa: “That the physical condition affects the moral character, there can now be no doubt, as well as of the reverse reaction,” the committee asserted. In other words, physical health and moral health were inextricably linked, but nevertheless distinct. According to the prevailing logic, enforcing moral reform would encourage better hygiene (and, in turn, lead to less disease). But by the same token, enforcing sanitary reform would both rob disease of its deleterious power and promote morality and temperance.

correlation—revolting conditions and despicable people.” See Christopher Hamlin, Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854 (Cambridge, U.K.: Cambridge University Press, 1998), 45-46, 168. Historian Mary Poovey has explained that, according to British educational reformer James Phillips Kay, cholera “was an ill that conflated physical disease with moral failings epitomized by domestic improvidence; as such, cholera, like immorality, could be cured.” See Mary Poovey, Making a Social Body: British Cultural Formation, 1830-1864 (Chicago, Ill.: University of Chicago Press, 1995), 72.

While still “a scourge of the sinful,” cholera resulted from “remediable faults in sanitation.” Rosenberg placed this transition somewhat later, around the time of the 1866 epidemic, by which time both public health officials and ministers “endorsed sanitary reform as a necessary prerequisite to moral improvement.” See Rosenberg, The Cholera Years, 5.

Arch Street Report 18, 19.

For more on hygiene, see Kathleen Brown, Foul Bodies. For a helpful comparison to the history of hygiene in a different context, see Anderson, Colonial Pathologies.
Intimate care often operated at the nexus of physical and moral health, in part shaping institutional responses to, and preparations for, disease epidemics. As cholera made its slow, lethal progress across Eurasia, Americans anticipated the disease’s arrival with dreadful apprehension. Any incoming Europe-borne vessel or pestilential wind, any stagnant pool or putrefying mass, could prove to be the harbinger of the fatal illness. But cholera did not attack indiscriminately. The College of Physicians noted that lower class men, and especially those “whose occupations exposed them to the weather” were the most vulnerable, throughout India and Europe. The occupants of “damp, filthy, and ill-ventilated houses” were also found to be predisposed to cholera. What might seem contradictory made perfect sense to nineteenth-century Americans: both those who were too greatly exposed and those who were too closely cramped—in other words, the poorest of the poor—were most likely to suffer from the disease. It was for this reason that the College urged the establishment of “suitable hospitals” in the city, in order to serve the class of persons most vulnerable to cholera.

These provisional hospitals did not always run smoothly; one cholera physician mentioned that he “wd have given an injection of salt & water, but could not find the pipe.” The makeshift hospitals could be, if not quite chaotic, at least untidy in their operations. Nevertheless, some of the cholera hospitals’ record books still survive.

312 *Report of the College of Physicians* 22, 32.
313 Hospital #3 Records 25. This probably referred to an enema; there is a small chance it could have been an intravenous saline injection, drawing on the technique developed by British physicians William O’Shaughnessy and Thomas Latta. See Thomas F. Baskett, “William O’Shaughnessy, Thomas Latta and the Origins of Intravenous Saline,” *Resuscitation* 55, no. 3 (Dec 2002): 231-234.
Located in a carpenter shop on the eastern side of Jones Alley near Front Street, Cholera Hospital #2 stood within a short distance of the Market Street Wharf and several other docks. Headed by Joseph Parrish, the hospital served exactly one hundred patients, at least eighty-nine of whom were white. Parrish was a Philadelphia native, born in the city in 1779, and an 1805 graduate of the University of Pennsylvania, where he studied under Caspar Wistar. A lifelong Quaker and abolitionist, he was apparently possessed of a good deal of public spiritedness; by 1832 Parrish had retired, but when epidemic struck he came out of retirement to serve as head of one of the city’s newly established cholera hospitals. Cholera Hospital #2 appears to have housed up to ten patients at a time, though that number averaged around four or five during the dates encompassing the epidemic. Parrish identified nearly a quarter of his patients as seamen, sailors, or mariners. Five—including two Irish men—were nurses. Whether he attributed their illness to contagion or another cause, he did not say. Cholera Hospital #2 apparently continued to operate well after the end of the epidemic, with a forty-year-old English tailor named James Higgins convalescing there until November 10th. Following the discharge of a twenty-four-year-old Irish laborer named Francis Hughes on October 27th, Higgins remained Parrish’s lone charge in the hospital for two weeks.314

Dr. William E. Horner, the dean of the Medical School of Pennsylvania and a professor of anatomy there, presided over Cholera Hospital #3, located at 35 Dock Street, near Front Street, close to the banks of the Delaware River. Born in 1793 in Warrenton, Virginia and educated at the University of Pennsylvania, Horner was not just an

314 Hospital #2 Records.
anatomist, but also a surgeon and pathologist. He maintained an interest in public health
corns as a member of both the Sanitary Board of Councils and the Medical Society’s
cholera committee. Although he “deprecate[d] hostilities” and strove “to avoid all
fruitlessly vexatious proceedings against any person,” Horner quarreled with his fellow
anatomists over the direction of anatomical instruction at the University of
Pennsylvania.315

A total of twenty-seven patients occupied Cholera Hospital #3 between July 25th
and August 20th. At least thirteen were white men. Five others were recorded as Black
men, and four as white women. Strangely, given his otherwise meticulous note-taking,
Horner did not explicitly identify the remaining five patients, including four men and one
woman, as either white or Black. However, he noted that one of the male patients was
Nova Scotian, and identifies the woman as German (and thus presumably white). Indeed,
one presumes that all five belonged to the unmarked category of whiteness.316 Horner
recorded the occupations of seventeen of his patients. Most worked in professions that
would have brought them close to the docks; he labeled three as seamen, two as
watermen, one as a sailor, one as a wharf worker, and wrote that one—a nine-year-old
Nova Scotian boy named John Paint—“Belongs to Brig Reward.” Eleven patients died
during their time in the hospital, including three Black men, four white men, two white
women, and two men whom Horner did not identify racially. Seven patients were

315 William E. Horner, letter to F. S. Beattie, Nov 17, 1830, quoted in James Webster,
16.

316 See Linda Waugh, “Marked and Unmarked: A Choice Between Unequals in Semiotic
discharged after being cured, and the rest sent convalescent to Bush Hill, an estate-
turned-hospital just north of the city that had been the property of famed eighteenth-
century lawyer Andrew Hamilton. On average, patients spent about two nights in
Hospital #3. Most patients who died, did so the same day they were admitted, while
patients who were transferred to Bush Hill tended to stay at Hospital #3 the longest—up
to eight nights. At any given time, there were only about three or four patients in the
hospital, though at times as few as one and as many as seven.317

Samuel Jackson served as the head physician for Cholera Hospital #5, located at
the corner of 6th Street and Lombard Street, very near the northern edge of Moyamensing.
Jackson himself lived at the corner of 8th Street and George Street, just a block away from
the Philadelphia Baths, an important public health establishment in the city that promoted
hygiene.318 Born in the city in 1787, Jackson graduated from the University of
Pennsylvania’s medical school in 1808. Actively involved in both professional medicine
and public health, by 1832 he had served as the president of the Board of Health and
instructor of physiology at the University. Jackson’s ledger notes lack the detail of
Horner’s regarding treatment, but provide more complete demographic data than either
Horner’s or Parrish’s. Jackson’s hospital served many patients from the African-
American neighborhood of Moyamensing: of the sixty-nine distinct patients, Jackson
identified ten as “black” and thirty-two as “colored.” The patients ranged in age from two
to sixty-nine, with a median age of 29.5. Fourteen were “servants,” nine were

317 Hospital #3 Records.
washerwomen, and five were hod carriers. Each of these occupations generally went hand in hand with some level of impoverishment and, especially in the case of washerwomen, potential exposure to contaminated water. Jackson’s hospital was busier than either Parrish’s or Horner’s, housing a high of at least nineteen patients on August 12th and an average of between six and seven on any given day. Moreover, the chronological spread of patients more closely matched that of the city’s epidemic at large, with the largest number of patients in the second week of August and the final patient, thirty-year-old white blacksmith Thomas Bryan, arriving on August 30th.319

The work of historians of cholera has not sufficiently captured the physical and sensory proximity between caregivers and cholera patients. Cholera hospitals were fundamentally intimate spaces. They were small and rarely housed more than a few patients at once, but they were also intimate because of the kinds of care that patients received. Because most physicians believed cholera to be noncontagious, intimate care practices were relatively commonplace, both in institutional and private settings. Belief in contagion, or lack thereof, was one of several factors that determined the therapeutic model adopted by a caregiver. Physicians and caregivers paid close attention to the symptoms a patient presented in determining a course of action. Symptoms also showed the progress of a disease, which allowed caregivers to adapt their treatments accordingly. Much of the work of treating cholera patients depended upon three intimate senses—taste, touch, and smell—and especially the latter two. Historians have generally assumed

319 Hospital #5 Records. Jackson identified one of the thirty-two, Jane Jackson (no relation), as “colored” in “Personal Observations,” but did not identify her race in the ledger notes.
that the intimacy of lay medical practice did not translate to professional medicine, but intimacy pervaded professional medicine as well. To cure cholera required prolonged and intimate contact with the patient; administering oral medications rarely sufficed on its own. Even physicians who subscribed to the doctrine of what later practitioners would derogatorily dub “heroic medicine” used intimate care practices. Cupping, bleeding, bathing, rubbing—these were active, sustained treatments that often had to be performed regularly. In cases like that of Robert D. Griffin, a twenty-two-year-old white patient of Jackson’s, frictions had to be “constantly maintained over the whole surface” of the body. It was this constant exertion to which non-contagionists attributed cases of nurses and physicians falling ill after caring for patients. Jane Jackson, a Black nurse in Jackson’s cholera hospital, “had undergone great fatigue in attending the patients, rubbing them, and had been able to obtain for several days and nights but little sleep.” When another nurse, the elderly French woman Constance Graffain, also showed incipient symptoms of cholera, Dr. Jackson remarked that “[t]he attack had been induced by excessive fatigue and loss of rest. In constitution the patient was feeble, and zeal and ardour in the performance of her duty led her to exertions too great for her strength.”

Even the administration of enemas could occupy hours at a time. Bell and Condie reported reassuringly about the effectiveness of “[e]nemata of various compositions”:

“Mr. [John] Lizzars [a Scottish surgeon] directs the water to be as hot as the hand can bear—in quantity three or four pints, with a teaspoonful of laudanum. In cases where it was retained in the intestines for the period of an hour, it has come off quite cold.” Bell

and Condie added that, “[b]y keeping the fingers on the anus for five minutes, the sphincter would generally resume its tone, and the injection will be retained for hours together.” Following this practice intensified the degree and duration of intimate contact between caregiver and patient. Physicians sometimes resorted to tobacco-infused enemas in hopes of improving the patient’s pulse, with mixed results. In such cases “[h]alf a drachm of tobacco, prepared with half a pint of boiling water, was administered. This was retained in the intestines,” though it appears to have encouraged vomiting.321 To administer an enema to someone with as horrifying and deadly a disease as cholera—to touch their anus for five full minutes, to assess the temperature of the discharge—would have required immense faith in the doctrine of non-contagion, a deep sense of humanitarianism, or both. The physicians’ case notes do not always clarify who administered a particular treatment; no doubt the task usually fell to the hands of an attendant or nurse. But at least occasionally, physicians administered their patients’ enemas themselves. Such eminent Philadelphia physicians as Samuel Jackson and J.K. Mitchell, both of whom served as cholera hospital physicians in 1832, employed a variety of enemas in doctoring their patients. Jackson treated the twenty-year-old “servant girl” of a Mr. F. with poultices, footbaths, and “an enema of flaxseed, mucilage, and laudanum,” which in her case greatly relieved her symptoms.322 On the other hand, Mitchell gave enemas to one of his patients, a seventeen-year-old girl, to no avail; only “a

321 Bell and Condie 100-101, 118-120.
tourniquet round the middle of the forearm so tightly as to demand nearly all my strength in turning the key” lessened her anguish.323

The use of purgatives and enemas to treat a disease like cholera, in which patients were already losing large amounts of bodily fluids, might seem like a bad idea, but it was in line with the practice of “heroic” medicine, which rejected palliative remedies in favor of treatments that produced visible reactions. Historian of medicine Charles Rosenberg has asserted that, “on the cognitive level, therapeutics confirmed the physician’s ability to understand and intervene in the ongoing physiological processes which defined health and disease; on the emotional level, the very severity of drug action assured the patient and his [sic] family that something was indeed being done.”324 The more violent and drastic the reaction, the more effective the treatment. Faith in identifiably heroic medical practices was ancient, but it came to be the defining theory of medical practice in late-eighteenth- and nineteenth-century Western medicine, and particularly American medicine. As Oliver Wendell Holmes later quipped: “What wonder that the Stars and Stripes wave over doses of ninety grains of sulphate of quinine, or that the American eagle screams with delight to see three drachms of calomel given at a single mouthful?”325

323 The Cholera Gazette vol. 1, no. 3, 36.
325 Oliver Wendell Holmes, Currents and Counter-Currents in Medical Science: An Address Delivered Before the Massachusetts Medical Society, at the Annual Meeting, May 30, 1860 (Boston, Mass.: Ticknor and Fields, 1860), 27.
Physicians elicited reactions from patients in other ways as well. Samuel Jackson described the case of “an Irishman employed as an ostler” suffering from cholerine: “When asked if he suffered any other pain than that from the cramps in the arm, he answered negatively. Yet the slightest pressure on the epigastrium elicited loud exclamations.” Bleeding proved effective at allaying his symptoms. The nurse-turned-patient Jane Jackson also suffered “pain in abdomen, augmented by pressure.” Here the caregiver’s sense of touch joined with that of the patient. Was the patient’s abdomen tender? Answering this question required both caregiver and patient to collect tactile sensory data: the physician or nurse touched the patient’s abdomen, and the patient reported (voluntarily or involuntarily) the degree of pain she or he felt.

Was such a practice “heroic”? Maybe in the minds of physicians it was a tactile analogue to depletion therapies, a way of eliciting a symptomatic reaction through touch rather than medicine. But at a more basic, literal level, it was intimate. Touching the patient to assess her or his level of pain and other similar practices relied on intimate sensory contact—in this case touch, in others smell and even taste—as well as open communication between caregiver and patient. Touching a patient’s abdomen allowed the nurse or physician to more accurately gauge the patient’s level of distress than observation or conversation—sight or sound-alone. In treating their patients, cholera physicians such a Horner and Jackson relied on intimate contact. For instance, each inpatient at Horner’s cholera hospital received touch-based intimate care alongside heroic depletion therapies; as often as not, therapeutic practices were simultaneously intimate

and “heroic.” Commonly, touching took the form of applying therapeutic friction to the extremities, administering of mustard plasters and embrocations, bathing and sponging the body, taking the pulse, and manually assessing the temperature of the skin, breath, and tongue. In cases like that of Black New Jersey native John Brooks, a sixty-two-year-old “intemperate” wharf-worker, Horner ordered rubbings every fifteen minutes. Intimate care practices extended well beyond frictions and baths. Horner “put an old opium pill in rectum” of fifty-one-year-old white New Jersey native Daniel Pearson, and ordered “[h]ot fomentations to the region of the Uterus” of twenty-one-year-old white Ann Hollingsworth. Hollingsworth’s thighs received special treatment as well, as Horner ordered “[b]listers to inside of thighs,” adding that they be rubbed down with olive oil.327

“Heroic medicine,” as derogatorily labeled by later physicians, did not dominate nineteenth-century professional medicine in the United States to the extent that scholars have assumed, nor even to the extent that nineteenth-century American physicians claimed it did. Even as some physicians employed extreme depletive remedies to distinguish themselves from lay practitioners, they relied upon older practices grounded in intimacy. While professional physicians imagined a degree of distance between themselves and their patients, in ways that lay practitioners did not, they could not escape the fact that much of their therapeutic repertoire was fundamentally intimate in nature. Furthermore, physicians sometimes took heed of their patients’ suggestions and complaints regarding treatment. In the case of Anson Evans, a forty-three-year-old white man living on the south side of Water Street near the drawbridge above Spruce Street,

327 Hospital #3 Records 15-20.
Horner allowed Evans’s “[b]andages loosened as he very much complained of their tightness.” Similarly, Littleton Tacle, a thirty-five-year-old Black man who, like Evans, lived near the drawbridge, “complains of mustard plasters [on his calves].—removed to arms.” The thirty-three-year-old white washerwoman Sarah Craighead told Horner that “she will be able to leave Hospital by tomorrow,” and indeed she did return to her home in Stamper’s Alley the following day. The experiences of such patients conformed to the informal set of deferential reciprocity that structured the physician-patient relationship in continental Europe, Britain, and British North America prior to the mid-nineteenth century. Some historians have argued that, as home care gave way to institutional care, the reciprocity of the physician-patient relationship eroded, but Evans, Tacle, Craighead, and others might have quibbled with such claims. In their cases, this reciprocal relationship outlasted the transition to specialized care, at least in the United States.

328 Ibid., 8, 11, 38. One wonders if our Littleton Tacle was of any relation, however distant, to the J. Littleton Teagle who, having been born a slave circa 1812, moved to Philadelphia and practiced medicine there. See Roger Lane, William Dorsey’s Philadelphia and Ours: On the Past and Future of the Black City in America (Oxford, U.K.: Oxford University Press, 1991).

329 See Fissell, Patients, Power, and the Poor in Eighteenth-Century Bristol, 1. According to Fissell, “[p]atients’ choices of medical care, albeit constrained by poverty, were influenced by their understanding of the hospital’s charitable nature as well as the contingencies of ill health.” Although locally specific, Fissell’s argument maintains external validity given the nature of the Philadelphia cholera hospitals as free, if not strictly speaking “charitable,” public health institutions. Similarly, Dorothy Porter and Roy Porter have described the pre-Victorian physician-patient relationship in England as one of “quasi-contractual symbiosis,” as “the patients were the making of the doctors, and doctors the making of the patients.” See Dorothy Porter and Roy Porter, Patient’s Progress: Doctors and Doctoring in Eighteenth-Century England (Cambridge, U.K.: Polity Press, 1989), vi.

330 See Mary E. Fissell, “The Medical Marketplace, the Patient, and the Absence of Medical Ethics in Early Modern Europe and North America,” in The Cambridge World
Much of the risk in treating cholera stemmed from the continued emphasis on bodily fluids as indicators of health or illness, as caregivers assessed effluvia for signs of the disease’s progress. The composition of a patient’s vomit helped determine the origins and progress of a disease, as well as the efficacy of medications administered, according to principles of humoralism extending back to the fifth century BCE. Drawing on this ancient practice, Horner, like others writing about cholera, remarked on the variety of consistencies, colors, and smells of patients’ vomit. In some cases, such observations helped physicians guess what might have made the patient sick. Horner noted that Lawrence Holden, a forty-year-old Irish immigrant, “[t]hrew up nearly a whole egg, very hard.—Says he has been drinking egg-nogg.” while twenty-nine-year-old Mary Lee, whose brother was also a patient at Horner’s hospital, “[t]hrew up Pork & Cabbage in an undigested state.” When Jackson gave William Downing, an “intemperate” Black hod-carrier, a pill of mercury, ipecac, and opium, “he vomited a large quantity of indigested cabbage. A second pill was given, and a basin was nearly filled by vomiting of the same substance.” In other cases, by applying humoral theory, the appearance of the patient’s vomit allowed the physician to assess the progress of the disease, and thus how to treat it; a patient who “vomited a greenish fluid” needed different forms of treatment than one who “vomited a yellowish faecal looking fluid”—in the former case, the Black Drop (an


331 Wilson, “Fevers,” 383.

332 Hospital #3 Records 27.

opiate mixture) and “a cloth wet with Laudanum to Epigastrium,” and in the latter case, calomel and sulfate of morphia.\textsuperscript{334}

The typical diarrheal discharge for a cholera patient was the “rice water stool”—thin, white or clear, odorless diarrhea that resembled its namesake. But patients’ diarrhea, like their vomit, varied in consistency, color, and smell. Jackson described the changes in one of his patients’ diarrhea, thereby mapping the course of her illness: her “stools which were formerly dark and very offensive, are now white and without odour,” presumably referring to the disease’s characteristic rice water stool.\textsuperscript{335} Several of Horner’s patients evacuated “watery fluid” or “the rice-water fluid,” in one case “by the mouth & anus”; he described others’ diarrhea as “very copious,” “fætid,” and “very feculent.” As with vomit, the physician used diarrheal data to determine the best course of action for treating the patient. Rice water discharges called for a warm bath, frictions, saline solution, and perhaps a “hot panada with 2 tablespoonful [sic] of Gin in it”—and, if that failed, mustard plasters.\textsuperscript{336} On the other hand, Horner treated foul-smelling diarrhea with spirits of camphor, opium tinctures, and starch solutions. Here again, physicians fell back on what they knew about more familiar diarrheal ailments. “Heroic” medicine and intimate care were not wholly at odds. Intimate care could be violent, intrusive, and coercive, even as physicians heeded their patient’s wishes, especially during epidemics like cholera, which brought professional physicians in contact with members of a choleraic underclass.

\textsuperscript{334} Hospital #3 Records 21, 25.
\textsuperscript{335} Samuel Jackson, “Personal Observations,” 331-332.
\textsuperscript{336} Hospital #3 Records 2-28.
Did doctors with different etiological theories treat patients differently? The answer is complicated, because the question itself is really two questions in one. The confusion hinges on the double-meaning of the word “treat.” The question could mean: did physicians of different etiological beliefs provide patients with different treatments? Or, it could also mean, did they interact with patients differently? Physician-patient relationships were already in flux during the early nineteenth century, thanks in part to the rising importance of pathological anatomical science. In addition, “the clinical investigation started to become both art and science, in the form of percussion, palpation, and auscultation,” medical historian Edward Shorter has explained, “permitting the physical examination of the patient to go beyond merely looking at the tongue and urine, and feeling the radial pulse.” Historian of medicine Charles Rosenberg has argued that therapeutics “involves emotions and personal relationships, and incorporates all of those cultural factors which determine belief, identity, and status.” Furthermore, he wrote, “[t]he physician’s art, in the opening decades of the nineteenth century, centered on his ability to employ an appropriate drug, or combination of drugs and bleeding, to produce a particular physiological effect. This explains the apparent anomaly of physicians employing different drugs to treat the same condition; each drug, the argument followed, was equally legitimate, so long as it produced the desired physiological effect.” In a profound sense, then, physicians treated different patients differently, both in the

medicines they administered and in the subtler interactions that made up the “ritual” of therapeutics.338

White beliefs about Black bodies had ramifications when it came to intimate care. On the surface, treatments given to patients of color did not differ markedly from those given to white patients. When treating Littleton Tacle, Horner “[o]rdered mustard plasters to inside of the thighs & arm above & below knee & elbow.—all the other parts of the extremities to be well rubbed with Aq: Ammon: [aqueous ammonia solution] mingled with a small portion of Ol: Olio: [olive oil]—& then swathed with flannel rollers.—The friction to be repeated frequently & rollers reapplied.” Before moving on to treating her thighs and uterus, Horner treated Ann Hollingsworth in the following manner: “Gave Dover’s powder [a sudorific mixture comprising ipecacuanha, opium, and potassium sulfate].—Mint tea.—well rubbed with Vol: Lin:.” 339 In both cases, the patients were rubbed with volatile liniments—that is, a rubefacient mixture of ammonia solution and a nonvolatile oil. Jackson summarized the treatment of fifty-one-year-old “coloured” washerwoman Naomi Francis: “The camphorated effervescent draught, with acetat. opii, gtt. iv. [four drops, or roughly a quarter of a milliliter, of lead acetate mixed with opium] to each dose, was given every half hour, and the extremities surrounded by hot oats; cold flaxseed ptisan for drink.” In the case of Robert D. Griffin, Jackson ordered “[t]he camphorated effervescent draught with acetat. opii … and the abdomen covered with

338 Rosenberg continued: “To understand therapeutics in the opening decades of the nineteenth century, its would-be historian must see that it relates, on the one hand, to a cognitive system of explanation, and, on the other, to a patterned interaction between doctor and patient, one which evolved over centuries into a conventionalized social ritual.” See Rosenberg, “The Therapeutic Revolution,” 4, 11.

339 Hospital #3 Records 12-18.
scarified cups; dry heat applied to the extremities by means of hot oats, and the same around the body; frictions constantly maintained over the whole surface; iced water for drink.”  

The treatments administered to Francis and Griffin were nearly identical and, by nineteenth-century standards, not exactly on the weak side in terms of dosage. A standard treatment at the time for gastric complaints might have comprised, among other remedies, sixty drops of lead acetate per day, much less than the ninety-six given by Jackson to Francis and Griffin.  

However, a treatment given by a white physician to a white patient necessarily acquired a different set of implications when given to a Black patient. According to Rosenberg, African Americans “shared, to an exaggerated extent, the distaste of the poor for hospitals and the medical profession,” and justifiably so. At the time, researchers saw persons of color—especially enslaved persons—as suitable subjects for coercive medical experiments; James Marion Sims’s cruel gynecological experimentation on enslaved women between 1844 and 1849 is just one of the better known examples.  

Professional medicine could promise Black patients additional suffering at least as much as it promised them care. In a speech before the Female Literary Society of Philadelphia,  

341 See, for instance, John Eberle, A Treatise on the Practice of Medicine, vol. 1 (Philadelphia, Pa.: Grigg & Elliot, 1838), 224. It should be noted, however, that the treatment plan prescribed by Eberle called for two doses of thirty drops daily, rather than fewer drops given at more frequent intervals like that of Jackson.  
342 Rosenberg, The Cholera Years, 60.  
343 For more on Sims and, more to the point, the enslaved women who were his patients, see Owens. In Medical Bondage, Owens “recognizes the unheralded work of those enslaved women recruited against their will for surgeries and made to work while hospitalized,” presenting “the holistic retrieval of owned women’s lives outside the hospital bed.” (3).
Black activist Sarah Mapps Douglas urged her audience to maintain faith in God as the threat of cholera increased: “What but this can support us should the pestilence which has devastated Asia be born [sic] to us by the summer breezes?” Small wonder, then, that some Black patients were “brought” or “sent” to cholera hospitals rather than checking in of their own accord, as in the case of Lee Jackson, who “[a]pplied for admission into the Alms House, but was refused on account of presenting symptoms of Cholera, & sent to Hospital” in a “[c]ollapsed” state. Who did the bringing or sending was not always so clear, and in some cases white patients were also brought to hospitals against their will, but in any case, containing as many cholera cases as possible within the confines of hospitals and other institutions reassured the public that the epidemic was at least partially under control. There was plenty of legal support for bringing patients into the hospitals without their consent; the white tailor James Higgins “[w]as sent to the Hospital by the Mayor.”

The association between cholera and Blackness refracted intimacy between caregivers and patients through a racial lens. Scrutinizing case notes to establish the relationship between a white physician and his Black patient requires, to some degree, speaking in the language of perhaps. Nevertheless, William Horner’s notes for Littleton Tacle’s case give remarkable insight into the interracial physician-patient relationship. On August 6th, the day Tacle entered the hospital, there was only one other patient—


345 Hospital #2 Records. Echoing Mary Fissell, Deirdre Cooper Owens has argued that, for Irish-American women in nineteenth-century New York City, “the act of choosing where to be treated medically was one of the ways they claimed ownership of their bodies and medical experiences.” See Owens 93.
forty-three-year-old white waterman Anson Evans, who died that evening. No other patients entered the hospital for the remainder of Tacle’s time there. This might have been the closest thing to private care that Tacle had ever received from a white physician. Less than five hours before his death, Horner noted that Tacle “says he was dreaming when I awoke him, of home in Va &c.”

What prompted Horner to make note of this? Did he merely find it interesting? Touching? Horner himself had grown up in Virginia; maybe he felt some connection to Tacle due to their shared home state. Maybe it was evidence of Tacle’s lucidity: he “says he was dreaming,” and thus distinguished his dreams from reality. Or maybe “dreaming” was Horner’s word—maybe Tacle believed himself to be back home in Virginia—and the note was meant to show Tacle’s delirium as he approached death.

Cholera’s 1832 visit to Philadelphia was brief but destructive, though perhaps not as destructive as the city’s residents had feared. Compared to many other North American cities—especially Montreal and New York—Philadelphia’s 1832 cholera epidemic might have seemed almost insignificant. (Its victims and their families, of course, would have disagreed.) But assessing the impact of an epidemic requires attention to more than just raw numbers. The 1832 cholera epidemic both directly and indirectly changed the way that Philadelphian physicians understood disease, especially epidemics, as well as the human body. Physicians’ experiences with cholera—which, of course, depended on patients’ experiences of the disease as well as of treatment—catalyzed a drive toward categorization and compartmentalization of bodies, body parts, symptoms, and diseases.

346 Hospital #3 Records 13.
that in turn informed how physicians responded to subsequent epidemics.

It is tempting to read the fact that William Horner took the time to record, however briefly, the dreams of a dying Black man as evidence of a degree of recognition of Littleton Tacle’s humanity. As cholera beset Philadelphia, however, Horner was busy amassing a vast collection of anatomical specimens. Horner’s patients were always at least potentially specimens-in-waiting. In 1834, when cholera returned to Philadelphia, Horner reported the case of Jacob Myers, a thirty-six-year-old Black man “of a make somewhat robust.” At the time, Myers was a patient at the Blockley Almshouse, “under treatment for a scrophulous tumour of the shoulder.” Upon Myers’s death from cholera, Horner wrote that “[a]t the suggestion of Dr. PHYSICK I took a piece of the intestine”—specifically the jejunum—“which had been preserved in alcohol, and after a maceration of a week, in a room the temperature of which was seventy degrees of Fahrenheit, the membranous character of the lining was still preserved.” Horner placed the specimen “in the Anatomical Cabinet.” Performing an autopsy was an intimate act, and no less intimate for its intrusiveness and violence. And while Horner’s interest in Tacle’s dying dreams points to the intimacy of their therapeutic relationship, this intimacy—an intimacy that tilted at times toward tenderness, at times toward violence—was provoked in part by the manner in which the cholera hospitals operated, and in part by the kinds of


intimate care cholera patients required.

The autumn of 1834 witnessed “a partial renewal of cholera” in Philadelphia, both among its general population and “among the inmates of the Alms-house, transferred in toto to the new building in Blockley township, on the west side of the Schuylkill.” Myers was but one patient who fell victim to the disease during its 1834 appearance. Horner described the disturbing sudden death from cholera of H. S. Mulda, “an inmate [of the Almshouse] of some years.” Approximately seventy years old, Norwegian-born Mulda appeared much older due to his “long flowing white beard, which he took great pleasure in cultivating, but which was removed from him by force a short time before his death.” Though Mulda was “unsound,” his “habits [were] extremely regular” and his “demeanour quiet.” On September 22, 1834, he “went … to a pile of fresh oyster-shells and was seen nibbling at them; he also may have got some oysters from them in an unsound state.” Horner admitted that “it is difficult to account for this whim about the oyster-shells.” The following morning, “he was found in his bed dead, sitting against the wall at the head of his dormitory.” According to Horner, “[h]is limbs were rigid; a chamber-pot was full of rice-coloured water, and some was found on the floor.” Upon Mulda’s autopsy, “[s]mall

349 At the end of his 1835 monograph on cholera, Horner included an image of a section of Myers’s jejunum. The image is simultaneously disturbing and strangely beautiful. In the interest of not reinforcing the violent voyeurism of such nonconsensual depictions, I have chosen not to reproduce the image, even though it is the closest thing to a portrait of Jacob Myers that will ever exist. Hershini Bhana Young has theorized “a flesh and blood diaspora … embedded in the dense structures of memory.” Young referred to “the underrecognized injury of the black body, which leaks blood and pus even as it thrives in creative survival.” See Hershini Bhana Young, Haunting Capital: Memory, Text, and the Black Diasporic Body (Lebanon, N.H.: Dartmouth College Press, 2006), 1-2. For more on the violence of images of Black suffering, see Kimberly Juanita Brown, The Repeating Body: Slavery’s Visual Resonance in the Contemporary (Durham, N.C.: Duke University Press, 2015).
sharp fragments of oyster-shells were found along the whole alimentary canal, so that if all had been collected it would have amounted to several tea-spoonfuls.”

Horner confessed that he had “always felt an extreme interest in obtaining a knowledge of the pathological changes in cholera; for the very evident disproportion, between the intense symptoms of the disease and the trivial appearances reported from thousands of dissections, exhibits an hiatus to the anatomist, well calculated to make him review all his knowledge of the natural structure, and to test its accuracy.” Drawing upon the evidence of numerous dissections, Horner outlined four “morbid anatomical characters” in the alimentary canal of a cholera patient, including “[a] lining membrane of coagulated lymph, which exists in the small intestines at least, if not in the stomach and colon also, and resembles in texture and mode of adhesion the membrane of croup.” It was this morbid change within the jejunum of Jacob Myers that struck Horner and Physick.

According to his observations, Horner concluded that “[t]he epidemic character of cholera, its independence of all meteorological conditions of the atmosphere, and moreover its subjecting an entire community to its influence under some symptom or other, wherever it appears for the first time; show analogies with exanthematous diseases.” As an exanthem, Horner argued, cholera was an eruptive disease, essentially producing a kind of gastrointestinal “rash” analogous to the cutaneous expressions of measles or smallpox. In one autopsy, of fifty-three-year-old John Thomas, Horner reported that “[t]he mucous coat of the stomach and bowels was so soft as to be torn off

351 Ibid., 4-5.
easily by scratching with the end of the nails.” Horner’s observation regarding the softness of Thomas’s gastrointestinal lining stands as a graphic reminder of the glovelessness of early-nineteenth-century autopsies. Physicians like Horner placed the utmost importance on close and careful examination when it came to dissections, which entailed intimate skin-to-tissue contact.352

However, Horner could not turn every patient into a specimen for dissection. The families of certain powerful patients could refuse to allow it, as in the 1834 case of fifty-year-old city commissioner Joseph Strahan: “The family being opposed to it, the benefit of an examination was lost.”353 A rudimentary code of ethics apparently prevented Horner from defying Strahan’s family’s wishes, though it was not until 1847 that the American Medical Association produced its first official Code of Ethics—and even then, it had little power or influence.354 British physician Thomas Percival published the first edition of his Medical Ethics in 1794, which he expanded in 1803. However, Percival’s text made no explicit mention of any notion of informed consent. On the contrary, Percival emphasized that patients should respect the authority of physicians almost


without question; Percival assumed that when it came to a patient’s welfare the physician would know best. In the case of Strahan, the physician’s authority did not match that of a powerful man’s surviving family. For that matter, in many cases the physician’s authority proved no match for a disease as debilitating and deadly as cholera, much to doctors’ consternation. Familiar intimate care regimes did not reliably save patients. Perhaps the return of a more established epidemic could restore physicians’—and the community’s—faith in professional men of medicine.

In the years following the cholera outbreaks, physicians made a series of discoveries that prompted them to revise their understandings of two familiar diseases: typhus and typhoid. During this time, Philadelphia physician William Gerhard’s dissections of his patients signaled the further ascent of clinical intimacy in professional American medicine. By closely observing the cases of typhus and typhoid that came under his care, and autopsying the bodies of the disease’s fatalities, Gerhard distinguished the two diseases from one another, based both on symptoms and on the presence or absence of post-mortem intestinal lesions. To do so required a clinicalization of physician-patient intimacy, both before and—if the time came—after the patient’s death.

This chapter continues the previous chapter’s exploration of the clinicalization of American medicine in the 1830s and 1840s. Physicians of the time sought to categorize diseases, anatomical structures, and entire bodies with increasing specificity. They catalogued the various morbid changes produced by different diseases, as a way to better understand the human body as well as the operation and diagnosis of diseases themselves. This impulse led to the conclusive differentiation between typhus and typhoid through anatomical comparisons of dissected victims of the two diseases. Earlier writers had trouble distinguishing the two diseases; typhus in particular was commonly confused with an array of other conditions. The driving forces behind this project of categorization
were primarily institutional physicians like Samuel Jackson, William Horner, and William Gerhard, whose professional trajectories put them on the front lines of medical clinicalization.356

By the end of the first cholera epidemic, American physicians had thoroughly rejected Broussais’s theories of pathology, having flocked to Paris to study with his adversaries.357 In their quest to understand disease, American physicians turned to the ascendant science of anatomy. In part this paradigm shift was due to the writings of Samuel Jackson, for whom—unsurprisingly, given the specter of cholera—an acute understanding of gastroenteritis was vital in uncovering the secrets of fever.358 And it was not long before Philadelphian’s physicians could put Broussaisian pathology to the test, for the city’s residents experienced a typhus epidemic during the spring and summer of 1836. But scholarship on typhus in the United States remains scant. In part, this is due to the muddled historical record regarding typhus: it is never quite clear whether an epidemic named “typhus” was truly typhus proper.359 In this sense, though, the 1836 typhus

356 Rachel N. Ponce has noted that dissections at the time often concentrated on one portion of the body before moving on to the next, speculating that “it seems likely that performing a dissection in such a piecemeal manner contributed to the conceptual division, separation, segmentation, and categorization of the body so prevalent in medicine at this time.” See Ponce 356.


359 Historian Margaret Humphreys cautioned that “the historian of typhus in nineteenth-century America has to tread carefully,” for “[i]t is likely that in any epidemic, cases of other diseases are mixed in with the supposed typhus statistics.” See Margaret
epidemic differed little from, say, the 1832 cholera epidemic, in which the disease was at times under- and at other times over-diagnosed.

A louse-born infectious disease, typhus is caused by a Gram-negative bacterium called *Rickettsia prowazekii*. Because typhus spreads through infected louse feces, it can appear contagious, tearing through densely populated areas with frightening rapidity. It was a truism among nineteenth-century physicians that typhus “tarries … in the illfated [sic] hovel, of the poor and comfortless.”

In the words of one mid-nineteenth-century physician, typhus:

> is the pestilence which dogs the footsteps of retreating and discomfited armies, and takes up its dwelling in their tents; which hides itself within the dark and noisome walls of ancient prisons; which lurks, amidst destitution and vice, in the narrow lanes and unlighted cellars of great cities, and which has been, for many generations, the perpetual inmate of the low, mud cabins of the Irish poor.

Later in the nineteenth century, German epidemiologist August Hirsch would opine that “[t]he history of typhus … is the history of human misery.” Commonly associated with the crowded and unsanitary conditions of jails, ships, and hospitals, typhus attacked destitute populations mercilessly. Unsurprisingly, physicians and laypersons alike often


360 Samuel Jones n.p.


blamed victims of the disease for their own suffering, believing that vicious, debauched, and unhygienic lifestyles begat typhus.

During the early nineteenth century, Philadelphians who were interested in typhus could have read any of a number of books on the topic. Throughout that time, though, medical writers had difficulty pinning down precisely what typhus was. The Austrian physician Johann Valentin von Hildenbrand sought to fix this problem in his 1809 work, *A Treatise on the Nature, Cause, and Treatment of Contagious Typhus*, translated into English by S. D. Gross in 1829. In his treatise, Hildenbrand delineated a catalogue of definitions of “typhus” given by various medical writers, many of whom erroneously conflated all nervous fevers under the umbrella of typhus. Such confusion was precisely why some—including Hildenbrand—believed the disease to be contagious and others not.363

In 1816, Francis Brognard, a physician from New Jersey and alumnus of the University of Pennsylvania’s medical school, remarked that typhus could prevail in various parts of the body, as the title of his work *Observations on Typhus Fever, Typhus Pneumonia, Typhus of Stomach, and Dysentery* would suggest. When it came time to stake a claim whether or not typhus was contagious, Brognard demurred, using much the same language that later writers would employ in discussing the contagious or noncontagious nature of cholera. In cases when exposure to typhus did not result in contracting it, “[s]uch persons … may not at that time be debilitated, and thereby predisposed to disease, or the system though debilitated, may not be sufficiently so; or the

contagion may not act with energy enough.” Brognard asked his readers rhetorically, “[a]re persons by attending on, and nursing the sick, more liable to the disease than others, not so situated?” Of course, but “such persons undergo fatigue, loss of sleep, anxiety of mind, and thereby they become debilitated, and without supposing the fever contagious, we may fairly infer that general causes then operate on the body with increased vigour, without bringing in the aid of contagion.” In the end, Brognard opted for a nebulous middle road: “Perhaps, both infection and contagion, may act in concert in producing disease.”364

Despite the efforts of writers like Hildenbrand and Brognard—or perhaps because of them—typhoid and typhus remained two poorly understood and commonly confused diseases, in part because they rarely occurred in the same place at the same time, and in part because their sufferers commonly suffered from high fevers and a hallmark rash consisting of small spots. In the early nineteenth century, several medical students at the University of Pennsylvania completed dissertations on typhus. David Norton’s 1815 dissertation considered typhus gravior and typhus mitior (or typhoid) variants of the same disease, “the former differing from the latter only in point of violence, requiring modification of the same treatment”—for instance, ipecacuanha in early stages, or diaphoretics in later stages. Norton remarked that subsultus tendinum and petechiae were common symptoms of typhus gravior, and listed among the disease’s causes “marsh miasmata and the effluvia arising from putrid fish, want of nutritious diet, cold

alternating with heat, contagion or infection, [and] impure or confined air.” The following year, John Wildman Jenks penned a dissertation on the topic of the 1815 typhus outbreak in Newtown, Pennsylvania, northeast of Philadelphia. Jenks remarked that “[n]o situation, however healthy, appears to be exempt from [typhus’s] ravages: nor no class of citizens, whatever their occupation, or manner of life may be, are secure from its attacks,” an observation at odds with the wisdom of the day that strongly associated typhus with poverty and degradation. Significantly, Jenks added that “[t]he Intestines were usually, but little affected” among those afflicted during the outbreak.

In his 1819 dissertation, William Poindexter, like his mentor Nathaniel Chapman, “rejected” the division of typhus into the customary gravior and mitior variants, believing that only “the state of the patient at the time of attack” influenced the severity of a particular case of typhus. University of Pennsylvania medical student Littleton Hardy Coleman dutifully agreed with Chapman as well, writing in his 1821 dissertation on typhus that “this division cannot be of any practical utility.” Poindexter noted that petechiae were common, “being sometimes of a bright-red, sometimes of a pale red, and

365 David Norton, “Typhus Fever” (1815), 378.748 POM 54.1, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 2, 5, 8, 9, 13.


sometimes of a livid colour.” Such surface-level observations were often all students had to go on at the time. John Boyd, a Kentucky native, lamented in his 1820 dissertation on typhus that, “[o]wing to the prejudices of the age, we have never made dissections with a view to determine the precise seat of its attack; and can only draw our deductions, from an attentive consideration of its most prominent symptoms,” including fever, stupor, and nausea. Boyd’s frustrations anticipated the rising importance of postmortem examinations already incipient at the time of his writing, thanks to the Paris Clinical School and its emphasis on the necessity of pre- and postmortem familiarity with patients’ symptoms and bodies. Although Boyd and likeminded physicians of the time considered premortem observations insufficient to understanding disease, they did not consider them wholly useless. On the contrary, they believed that only through a combination of careful pre- and postmortem examinations could physicians accurately diagnose and treat illnesses.

Littleton Hardy Coleman firmly believed typhus to be contagious, at least under certain circumstances. He noted “[t]he disease in the United States, assumes a very different character from the Typhus described by European writers,” nor was the disease common in the southern states. Perhaps this was because, in warmer climates, would-

369 Poindexter 11.
be typhus manifested as a tropical fever. Virginia-born George Jefferson, like many medical students at the University of Pennsylvania, greatly esteemed the medical views of Nathaniel Chapman; Jefferson wrote that Chapman’s “opinion should be strictly attended to on every medical subject,” and typhus was no exception. Chapman believed typhus to be contagious “to a limited degree,” and like any good medical student of the time, Jefferson concurred. By the late 1820s, the time of Jefferson’s writing, postmortem examinations had become a more common form of medical education. Jefferson noted that in late stages of the disease “the vicera [sic] are engorged,” including the intestines, suggesting that typhus—at least in its congestive form—could migrate to the intestines over the course of its progress. Alexander Lowber of Delaware argued that in the United States, typhus was actually “the effect of some other disease,” and should be treated as such. Its causes included marsh miasmata, but also fear, grief, “and in fact whatever debilitates the system.” Caring for typhus patients required constant vigilance, especially if patients lost control of their bladder and bowels, as “whenever a motion from the patient takes place it ought immediately to be removed.”

In 1829, Joshua Jones wrote in his dissertation that changes in collective habits had rendered Philadelphians more prone to typhus than they had been in the past. Although Jones disputed the existence of Cullen’s synochus—a kind of intermediary

373 Hamlin, Public Health and Social Justice in the Age of Chadwick, 115.
between typhus and yellow fever—typhus was nevertheless “baffling” because of its diversity. Even so, Jones assured his readers that “its type is so well marked, and its symptoms so peculiar, that to confound it with any other disease, would be almost impracticable.” Per Broussais, “the seat” of inflammation was the mucous membrane of the stomach and small intestine; this was not always the case, according to Jones. Rather, although the “thoracic and abdominal viscera” presented as inflamed, and “the vessels of the latter are injected with red blood, or loose [sic] their transparency and become much thickened,” through “morbid associations” the disease could come to affect the entire body, breaking free of its primary causes. Emetics worked by “discouraging the regular concatenation of morbid associations.” On the point of contagion, Jones equivocated, though he was “rather inclined” to believe that typhus could spread from person to person, at least in some cases.376

Philadelphia’s location rendered its inhabitants vulnerable, according to William Gerhard, to “the fevers observed at the northern, and occasionally those of the southern states.” But this made Philadelphia a prime spot for observing the differences between typhoid and typhus. During the winter of 1835-6 a mysterious disease, “characterized by pungent burning heat of the skin, dusky aspect of the countenance, subsultus, delirium, with great stupor and prostration,” manifested in the Philadelphia Hospital, at that time the name for the Almshouse’s medical wards. Strangely, “there was no diarrhœa, and but few other symptoms referrible to the alimentary canal.” Initially, the physicians at the

hospital—including Gerhard himself—believed it to be bronchitis or some other pulmonary disease. By March, it became clear that the disease, whatever it was, had become epidemic, as cases became more numerous. These latter cases “attracted the greater attention from their occurring in groups of several from the same house, and almost all coming from a particular neighbourhood.”

Gerhard laid out the epidemic’s geography: although the disease extended to “various parts of the city and neighbouring districts,” he explained, “by much the greatest number came from that part of the town which extends from Lombard street to a little below Shippen, and from Fifth to Eighth streets,” a neighborhood infamous for poverty and vice. Gerhard reckoned that “this small but crowded district became almost an infected suburb,” describing it as “the St. Giles or the Faubourg Saint Marcel of Philadelphia.” But it was the density of the neighborhood, and not its poverty or viciousness per se, that Gerhard identified as the primary contributing factor to the disease’s violence there: “Small street and St. Mary’s street, with the numerous courts and alleys running from them, contained many more sick than other streets inhabited by a population nearly as poor and intemperate, but less crowded.” Only a handful of cases appeared in the Almshouse and house of employment, and “[b]ut few cases … occurred in the central parts of the town, where the inhabitants are generally in easy circumstances, and comfortably fed and lodged.” Several of the earliest cases of the epidemic “were

377 William W. Gerhard, “On the Typhus Fever, Which Occurred at Philadelphia in the Spring and Summer of 1836; Illustrated by Clinical Observations at the Philadelphia Hospital; Showing the Distinction Between This Form of Disease and Dothinenteritis or the Typhoid Fever with Alteration of the Follicles of the Small Intestine,” The American Journal of the Medical Sciences no. 38 (February 1837): 290, 294.
seven negroes, the entire population of a cellar in the lower part of the city.” According to Gerhard’s observations, “[t]he symptoms varied but little in the seven cases, and upon examination of two of the number who died, no lesion of sufficient importance to account for the symptoms could be detected.” The epidemic did not relent as summer came—an “unusually cool” one, Gerhard remembered. But “as the summer advanced, and an epidemic dysentery appeared, the fever was changed in character, and frequently offered a new symptom, that is diarrhoea, which was wanting in the earlier months.”

Some Philadelphians remembered that a similar disease had beset the city in 1812. The epidemic of that year was rather unusual. Benjamin Rush had written a few years earlier that typhus “has been but little known in the United States since the revolutionary war, at which time it prevailed with great mortality in the hospitals and camps of the American army.” Those cases that had occurred in the United States were easily traced to ships carrying European passengers. It was this earlier epidemic that had led to the death of Benjamin Rush. To some, his passing had represented a kind of martyrdom in the name of scientific and medical progress. In the words of one poet’s elegy for the late doctor:

Behold fair SCIENCE weeping for her son.
I left the realms of light and sought this cave,
To mourn for him whom SCIENCE could not save.

378 Ibid., 294-295, 297-298, 301.
379 Benjamin Rush, An Inquiry, 66.
380 Elegiac Poem. On the Death of Dr. Benjamin Rush, Professor of the Institutes and Practice of Medicine and of Clinical Practice in the University of Pennsylvania. Who Fell a Victim to the Prevailing Typhus Fever, on the 19th of April, 1813 (Philadelphia, Pa.: Anthony Finley, 1813), 10.
Rush had expressed firm belief in the disease’s contagious nature, writing that “the jail, or, as it is sometimes called, the ship, or camp, or hospital fever, is communicated only by means of the excretions of the body.” That said, the disease needed certain environmental factors to spread effectively. In this way, it was much like yellow fever. In 1798, John Otto—a student of Rush’s and survivor of the yellow fever epidemic of that year—had “observed, if a person who had inhaled the seeds of the yellow fever in Philadelphia afterwards came into a family near the river, the same disease appeared in several instances in one or more branches of that family; but where persons brought the fever from the city, and went into a family on the high grounds, where the mild remittents prevailed, there was not a single instance of a yellow fever being excited by them in any of its members.” Rush agreed with his colleagues that “the same principle” applied to typhus. Even so, he reminded his readers that “[t]he perspiration [of a typhus patient], by acquiring a morbid and irritating quality more readily than any excretion, in consequence of its stagnation and confinement to the body in a tedious jail fever, is the principal means of its propagation.” Perspiration and confinement, Rush argued, produced a deadly formula that could easily spread typhus rapidly through a population, especially a filthy and incarcerated one. More to the point, in Rush’s estimation, exposure to typhus patients’ sweat within an infected space rendered physicians doubly vulnerable to the disease.

According to Joseph Parrish, the 1812 and 1836 epidemics “were really identical.” Gerhard noted that Parrish “practiced very extensively amongst all classes of

inhabitants in the winter of 1812-13, and was remarkably successful in his treatment of
the prevailing fever. He saw some of the cases at the Philadelphia Hospital in 1836,
before the disease had extended to the wealthier classes, and immediately recognised its
ture character.” With the help of Parrish, Gerhard identified the disease in question as
typhus, “which is variously designated: typhus gravior, ship fever, jail fever, camp fever;
sometimes petechial or spotted fever,” in contrast with typhoid, also known as typhus
mitior and dothinenteritis. In total, 214 patients were admitted to the hospital with typhus;
several others who had been admitted while suffering from a different disease later
contracted typhus. While the sex ratio of the patients was relatively even—120 men to 94
women—persons of color outnumbered whites by a ratio of more than two to one.
Roughly one in four patients died, and men of color seemed particularly susceptible.
According to Gerhard, typhus “always prevailed more extensively among them [persons
of color] than the whites who were living in the same part of the town and exposed to
nearly the same causes of disease.” While Gerhard connected this racial disparity to the
meaner conditions in which Philadelphian persons of color generally lived, he did not
explicitly assign blame to victims of typhus, except when they were given to debauchery
and vice.382

Initially, Gerhard and his colleagues dismissed the idea that typhus was
contagious. As his familiarity with the disease increased, Gerhard grew to firmly believe

382 Gerhard 293, 296-297, 310, 319. Given Rush’s association between typhus and sweat,
and Gerhard’s observation that Black Philadelphians were more prone to typhus in 1836,
it is worth remembering Thomas Jefferson’s earlier belief that Black persons “secrete less
by the kidneys, and more by the glands of the skin, which gives them a very strong and
disagreeable odour.” Thomas Jefferson, Notes on the State of Virginia (Philadelphia, Pa.:
Prichard and Hall, 1788), 148.
that typhus was contagious: “The matter of contagion, be it what it may, was generally mingled with the air, but sometimes seemed to be combined with the pungent hot sweat of the patients.” Here, Gerhard toed a middle line between miasmatic theory and contagion “from body to body,” in this case through the bodily fluid of sweat.383 Miasmatic theory still dominated medical discourse regarding the propagation and transmission of diseases; few diseases were commonly thought to be transmissible through physical contact between bodies or through fluids. Although many physicians, including the esteemed Nathaniel Chapman, believed that typhus could be contagious under the right circumstances, by the 1830s some disagreed, including spirited young New Englander Alonzo Chapin. In his 1831 dissertation, Chapin asked rhetorically, “if typhus be contagious, why should not the intermittent or remittent fever into which it sometimes changes, retain the same property? Or why should they not be contagious before they pass into the typhoid state?”384 By the 1830s it would have been ludicrous for a physician to state that an intermittent fever like yellow fever was contagious; why, asked Chapin, did physicians still support the doctrine of contagion pertaining to typhus?

Gerhard disagreed with the intrepid Chapin. As evidence of the disease’s contagious nature from body to body, Gerhard recalled the case of a nurse who, while shaving a dying patient, inhaled the patient’s breath. The nurse described the patient’s breath as having “a nauseous taste,” and shortly thereafter he “was taken with nausea, cephalalgia, and ringing of the ears.” Gerhard emphatically stated that “[f]rom that

383 Gerhard 299.
moment the attack of fever began, and assumed a severe character.” Similarly, an
“assistant was supporting another patient who died soon afterwards, he felt the pungent
sweat upon his skin, and was taken immediately with the symptoms of typhus.”
Significantly, Gerhard assured his readers that the nurse and assistant in question were
“both persons of intelligence, and, from their familiarity with the disease, quite free from
fear.” At the Philadelphia Hospital, “[t]hree of the principal nurses, and about a dozen
assistant nurses,” fell sick with typhus. Two of the principal nurses “belonged … to the
wards for blacks, where there were the greatest number of fever patients.” In fact, the
contagion was apparently so strong that “[t]here was only one nurse of a ward in which
many of the patients were collected, who escaped, but several of his assistants and
patients were taken ill.”385

It was clear, in ways that it was not for cholera patients, that intimacy with typhus
patients put one at risk of contracting the disease. Based on his observations Gerhard
concluded that, “besides the epidemic cause, from which the greater number of cases
seemed to arise, the fever was evidently propagated in a considerable proportion of
patients by direct contagion.” In other words, while the majority of cases were due to
some unspecified environmental factor that caused the epidemic in the first place, many
patients had caught the disease from someone else. That said, “[d]ead bodies either did
not communicate the contagion or its influence was easily counteracted by favourable
circumstances,” for Gerhard “and several of the resident physicians were engaged nearly

385 Gerhard 298-299.
every day during the most intense prevalence of the disease in making long and laborious anatomical investigations, without suffering from the fever.”

Gerhard, along with his colleague Caspar Wistar Pennock, had been the resident physician at the Almshouse infirmary from 1828 to 1830 and had worked alongside Horner during the 1834 cholera outbreak, and both had served at La Pitié in Paris during the city’s 1832 cholera epidemic. As such, Gerhard and Pennock were accustomed to serving as institutional physicians. Gerhard and Pennock observed that, in cases of cholera, “[t]he whole surface resembles that of a dead body, but with this remarkable difference, that the temperature during life seemed much cooler to the hand than some hours after death.” During their time in Paris, the two had performed a number of exceedingly thorough autopsies on victims of cholera. The reports of the autopsies are difficult to read because of their invasiveness. In their thoroughness, Gerhard and Pennock made note of as many details as possible, even if, in context, the details were unremarkable. For instance, in the case of the twenty-nine-year-old seamstress and nursing mother Charlotte Hevet, Gerhard and Pennock observed that “[t]he left mamma was slightly violet, rather large and very moist, yielding a flowing liquid of a milk colour.”

Interested in public health, Gerhard had also served on a special committee of the Board of Health during the epidemic. He reported that, while acting in this capacity, “in some instances we found houses completely vacated, the tenants being either dead or at

386 Ibid.
388 Pennock and Gerhard 17-18, 69.
the hospitals.” In fact, “[i]t was rare to meet with a severe case without seeing others in
the same house.” Such a remark could be contorted to support both the miasmatic
position and the belief in direct contagion; no doubt Gerhard’s readers of both
persuasions felt vindicated by this observation. Gerhard’s professional affiliations
connected him to farther flung institutions as well. In his article, Gerhard expressed his
indebtedness to Pennock, who “had charge of one half of the medical wards of the
Philadelphia Hospital,” and also had experience with “the dothinenteritis in the wards of
La Pitié at Paris,” at the time one of the centers of medical education in Europe.389
Although Pennock was ten years older than Gerhard, the two had attended the University
of Pennsylvania concurrently. Like his colleague, Gerhard had studied in Paris after
receiving his medical degree, an opportunity afforded to him by the well-connected
Samuel Jackson. Gerhard acknowledged that “[o]ur inquiries were conducted so much in
concert, and our opinions as to the symptoms and treatment of the fever were so often
compared together, that this memoir is in most respects the expression of the results
obtained by our joint labours.”390

But Gerhard was at least equally indebted to a French clinician by the name of
Pierre-Charles-Alexandre Louis. Gerhard opened his article with a rather cavalier

389 Gerhard 295, 298. Historian Lydie Boulle has argued that La Pitié, along with other
Parisian hospitals in the early nineteenth century, became “the center of teaching and
research, diagnostics and care, where clinicians and surgeons provide[d] the most
important part of the activities specific to a hospital in the modern sense of the word.”
See Lydie Boulle, “La médicalisation des hôpitaux parisiens dans la premières moitié du
Original text: « l’hôpital devient le haut lieu de l’enseignement et de la recherche, des
diagnostics et des soins, où cliniciens et chirurgiens assurent la part la plus importante de
l’activité spécifique d’un hôpital au sens moderne du mot. »

390 Gerhard 294-295, 298.
reference to his time in France as “a residence of two or three years at Paris.”

Louis is regarded as the originator of the field of clinical epidemiology and of clinical trial methodology, to both of which numerical data collection is central. But sensory observation, as well as the dissemination thereof, was equally vital to the ascendance of Louis’s brand of clinical medicine. And sensory data, while not easily quantifiable, formed the cornerstone of much of Gerhard’s article. Such observations did not supplant numerical data, but rather supported and contextualized it. Just as Louis had published descriptions of typhoid fever in painstaking, recognizable detail, so too did Gerhard plainly define and describe typhus, clearly distinguishing it from typhoid. Through performing the intimate work of clinical epidemiology—recording intimate pre- and post-mortem sensory details—physicians like Louis and Gerhard could hope to promote better understanding of otherwise poorly understood diseases.

Historian of medicine Edward Shorter has suggested that “pathological anatomy, whose source of knowledge is the laboratory and the autopsy suite, may not greatly have affected the psychodrama of the doctor-patient relationship.” But this argument ignores

391 Ibid., 289.


393 Leonard G. Wilson, “Fevers,” 401-402. Elsewhere, Wilson has noted that “Louis’s use of the term ‘typhoid’ was intended to express his belief that the disease was identical with typhus fever rather than in any way distinct from it.” Of course, Gerhard later departed from his French mentor’s opinion. See Leonard G. Wilson, “Fever and Science in Early Nineteenth Century Medicine,” Journal of the History of Medicine and Allied Sciences 33, no. 3 (Jul. 1978): 396.

394 Shorter 790.
the ways that clinical epidemiology—and the intimacy that it entailed—helped shape physician-patient interactions. Pathological anatomy fueled an interest in etiology, especially pertaining to fevers. Furthermore, pathological anatomical observations were crucial to the kind of clinical epidemiology practiced by Louis, Gerhard, and their colleagues, recasting the physician as simultaneously a caregiver and a scientist. In part, one of the draws of studying with Louis was the opportunity to learn about auscultation using a stethoscope, a practice of intimate care at the nexus of art and science. Indeed, the stethoscope itself owed its very invention to a man who himself stood at this nexus: René-Théophile-Hyacinthe Laennec, a French physician and musician. In 1816, Laennec used what he knew as a flautist to invent a device that augmented the sounds of a patient’s chest cavity, liberating physicians from the limits of their senses—and, perhaps, from the mutual embarrassment that could come from pressing their ears against the chests of women patients. At a surface level, stethoscopes and similar devices made interactions between patients and physicians less intimate. But by affording physicians fuller access to the anatomical machinations of a living patient—the patient’s heartbeat, for instance—such devices amplified, figuratively as well as literally, the sensory intimacy between physician and patient.

Laennec developed the concept of anatomical-clinical synthesis while working with the sick poor at the Hôpital Necker in Paris. The achievement of anatomical-clinical

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396 Leonard Wilson, “Fevers and Science in Early Nineteenth Century Medicine,” 398.
synthesis applied Laennec’s stethoscope to pathological anatomical observations. According to medical historian Guenter Risse, Laennec’s work regarding anatomical-clinical synthesis “not only extended techniques of physical diagnosis as important adjuncts of the new pathological anatomy, but also established the legitimacy of an approach that melded medical and surgical perspectives.”398 Through anatomical-clinical synthesis, physicians like Laennec could use pre- and postmortem observations to make sense of both the body and its diseases. Anatomical-clinical synthesis and the pathological anatomical observations that it relied on complicated the physician-patient relationship, rendering it reciprocal in new ways. While patients and physicians already had an established and ritualized reciprocal relationship, anatomical-clinical synthesis turned patients—especially institutionalized patients—into objects of inquiry in ways that they had not been before.399 Just as the ascendance of pathological anatomy changed the ways that patients and physicians interacted, Gerhard’s time in Paris changed the way he thought about himself as a practitioner of medicine. Historians Thomas Huddle and Jack Ende have argued that “[f]rom the 1820s onward, many of America’s most eminent clinical educators studied in Europe before beginning careers in the United States. Their experience in European hospitals reinforced their conviction of the importance of hospital


teaching for medical students.” The Paris Clinical School, as described by historian John Harley Warner, introduced American medical students not just to the stethoscope, but more crucially to “an anatomo-clinical paradigm rooted in systematic correlation of signs and symptoms observed at the bedside with lesions found in the organs at autopsy,” a crucial contribution to the development of clinical intimacy fostered by nineteenth-century American physicians. This anatomo-clinical paradigm was a method of thinking about and interacting with patient’s bodies that pivoted on physicians’ juxtaposition of intimate premortem sensory data collection and equally intimate postmortem observations.

Gerhard applied what he had learned in Paris to his work in the United States during the 1836 epidemic. Historian Molly Laas has argued that “American physicians aligned with the Paris Clinic held that until more accurate facts were known about the true nature of disease, physicians were left with few therapies to draw from and generally preferred a noninterventionist approach, relying on good food and rest to support the body’s ability to heal itself.” All the more reason for Gerhard to closely examine his patients, living and dead. The characteristics of the ill varied dramatically, with few noteworthy commonalities. Gerhard observed that, “[a]fter childhood, the age of patients


seemed nearly without influence.” Roughly half of the white patients were over 35, but this was no surprise. Admittedly, “[t]he blacks give a greater proportion of young persons, … [b]ut their comparative youth is easily to be accounted for by the large number of blacks engaged as labourers and inhabiting the infected part of the town, very few of them are old or middle aged men.” Besides, Gerhard proclaimed with some exasperation, African Americans had a “habit … to state themselves younger than they really are, partly from ignorance of the value of numbers and of the precise year of their birth.” In addition to age, “[t]he most perfect temperance did not prove a safe-guard when exposed to contagion.”

Gerhard included in his article the case of Margaret Walters, a twenty-four-year-old assistant nurse with a “[l]arge frame.” On March 17th, having felt ill for a few days, Walters, who worked in the women’s medical ward, began displaying a worrisome array of symptoms, which, with the help of Pennock’s notes, Gerhard detailed:

embonpoint considerable; intelligence languid; position in bed indicative of feebleness; surface of body warm, horripilations; great pain in the head and small of the back; lower extremities feel sore; expression of countenance anxious and distressed; sighs frequently; eyes languid, light is unpleasant; capillary circulation of face, which is flushed, active; tongue moist, slightly coated with light yellow fur; offensive odour of the breath; anorexia, with nausea and bitter taste in the mouth; great thirst; desires cool acid drinks; no soreness of throat; deglutition easy; constipation; no eruption or spots on the body.

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403 Gerhard 300.
404 Ibid., 308.
405 Ibid., 305.
For treatment, Pennock and Gerhard prescribed the application of six dry cups “until vesication takes place, to the nape of the neck and small of the back; sinapisms to feet; farinaceous diet; mineral water.” The following morning, he ordered fifteen cups “applied over the thorax,” and noted that “alvine dejections were induced by mucilaginous enemata.” This mystifying therapeutic lexicon represented treatments that were commonplace in the mid-nineteenth century: the production of blood-blisters through the application of glass cups, the application of mustard plasters, prescription of a starchy diet, and the rectal administration of a starch solution. On March 21st, Pennock and Gerhard’s notes directed to “[s]ponge with evaporating lotions, and exhibit cool mucilaginous enema, when surface is warm.” As Walters’s condition worsened, the intimate interventions to which Gerhard and Pennock subjected her became more intense. The same day, Pennock and Gerhard observed that “[t]he surface of the neck, chest, abdomen, and arms presents a mottled appearance, in consequence of being covered with spots varying from one to three lines in diameter. The smaller are rose coloured, whilst the larger have a lilac hue; the first disappear upon slight pressure, the larger, on the contrary, are not so easily effaced, and reappear more slowly.” Over the next week the condition of Walters’s bowels appeared to deteriorate rapidly, despite regular enemas and

sponging. On the 22nd, her “alvine evacuations [were] natural in colour and odour,” and on the 24th, her “dejections [were] dark yellow-brown colour, of moderate consistence,” but over the next few days her stools became “frequent” and “watery,” and she “cannot retain the injections.” However, upon her death, Gerhard found her “Glands of Peyer healthy, not developed; seen with difficulty,” consistent with a diagnosis of typhus rather than typhoid; in cases of the latter illness, the Glands of Peyer would have exhibited characteristic intestinal lesions.

Another of Gerhard and Pennock’s patients was a twenty-year-old “negress” washerwoman identified as Bush, who fell ill earlier in the epidemic than Walters. According to Gerhard, “[d]uring the last winter, she, with four negroes, occupied a small, damp, confined cellar in south Water street, near the Delaware, and suffered greatly from want of food and intense cold.” Having checked in to the hospital on March 6th, she had already “been sick three weeks.” Among her initial symptoms were “lassitude, general debility, loss of appetite, followed on the succeeding day by nausea and vomiting.” The next day, “whilst washing, [she] was suddenly seized by violent pain in the forehead,” followed by a sore throat and trouble swallowing. This last symptom carried on for “three or four days, when it disappeared spontaneously.” In response to Bush’s persistent constipation, the doctors “[o]rdered stimulating enema of ol. terebinth. sulph. morph. grs. 1/8, every hour until sleep takes place.” This treatment alleviated the constipation, “and

407 Gerhard 305-309. In Gerhard’s time, to “exhibit” a medication—in this case, an enema—meant to administer. Charles Rosenberg has argued that “the therapeutic interaction we have sought to describe was a fundamental cultural ritual, in a literal sense—a ritual in which the legitimating element was, in part at least, a shared commitment to a rationalistic model of pathology and therapeutic action.” See Rosenberg, “The Therapeutic Revolution,” 10.
patient slept after the exhibition of 3/8 gr. of morphia.” However, Bush continued to languish in other ways: she became “anxious,” and her “intelligence [was] confused, answers slowly but correctly, when her attention has been strongly directed to the question.” Pennock and Gerhard directed the oral and anal administration of essence of beef, but despite the intensely intimate treatment regimen Pennock and Gerhard prescribed, Bush passed away on the 9th of March.408

Gerhard also described the case of “Susan C——, aged 21, intemperate,” and like Walters of a “[l]arge frame,” who “entered the hospital March 27th,” having been “discharged from prison last winter.” He and Pennock noted that since then she “has suffered from intense cold and privations of every description,” though her “[h]ealth generally good, with the exception of a syphilitic affection manifested a year since.” Over the course of her illness, Susan generally produced yellow, odorless stools, sometimes “slimy,” sometimes of a “good consistence.” Her “skin was exceedingly hot,” and she complained of “noise in the ears,” like that of “blacksmiths hammering in the head.” As her health began to fail, Gerhard described her mental state as “languid,” and that she “answers questions slowly, but correctly.” On March 30th, Pennock and Gerhard ordered the following treatment: “Rub the limbs with a liniment of equal parts of turpentine and tinct. of cantharides; turpentine emulsion; small portions of brandy toddy,” but to no avail. Susan died that day.409

In the case of “Henry Holmes, black, aged 22,” Gerhard noted that the patient was “employed in unloading vessels, [and] lived with four others, in a small cellar.” Shortly

408 Gerhard 313-315.
409 Ibid., 310-312.
before his entry into the hospital, Holmes “drank very freely,” and fell ill the following
day with an assortment of symptoms, including: “pain in back, pelvis and limbs,
chilliness lasting a long time, and returning frequently; very dry skin; no sweating; slight
delirium; sight confused; hearing good; tinnitus aurium; no nausea or vomiting; bowels
constipated; urine red, not altered in quantity.” Holmes entered the hospital a week later,
on March 20th. Gerhard observed that Holmes had “[n]o cutaneous sensibility; no pain in
back or limbs,” but his “skin [was] hot, pungent and dry.” In response, Gerhard decided
on a course of treatment consisting of “[s]pong[ing]; cold applications to the head; flaxseed
enemata; gruel; thin broth.” Several days later, Gerhard called for the application of a
 “[b]lister to thighs.” He noted that Holmes’s “articulation [was] still difficult; feels better;
stupor continues, but he hears and answers questions.” When Holmes died on the
morning of March 31st, Gerhard was surprised: “The termination of the case was
unexpected. The patient had decidedly improved and the disease would probably have
terminated happily, if the inflammation of the lungs had not intervened, and rapidly
increased just before death.”410

Finally, on April 7th, Jacob, a thirty-eight-year-old German man, “very stout and
muscular” and “a chemist by trade,” entered the hospital under Gerhard’s care. As an
immigrant, Jacob was an archetypal typhus patient, but at the time of his illness Gerhard
noted that Jacob “has been in America four years, and has lived in Philadelphia during
the whole time.” Already he was “in the most advanced period of the disease, and with
very malignant symptoms.” According to the patient “[t]here was no other person ill in

410 Ibid., 319-321.
the house with him; remembers scarcely any thing of his disease, except that he had chills and vomiting, and has been ill nearly three weeks.” Jacob’s treatment consisted of a camphor enema and “[s]ponging with vinegar and water.” He died on the 10th, and upon his autopsy Gerhard described him as “[v]ery corpulent.” Gerhard recalled that, even before Jacob died, “[t]he fœtor arising from the skin and breath was very intense, and one of the assistants contracted the disease directly from him, while supporting him in bed.”

It was difficult, if not impossible, to determine whether the sickness had travelled through the air by way of the patient’s breath, or by skin-to-skin contact. Intimate sensory data supported Gerhard’s theory of typhus’s contagion, in a way that also supported both miasmatic and body-to-body notions of disease transmission. Again, the deeply intimate treatment regimen failed to save the patient. But it did not fail Gerhard, who drew upon pre- and postmortem observations of patients like Walters, Bush, Susan, Holmes, and Jacob to construct what he and many of his anatomically inclined colleagues considered a fuller picture of typhus. The logic of clinical intimacy required that some patients die.

Physicians like Gerhard, in response to epidemic diseases that demanded physician-patient intimacy to understand the disease and thus to effectively treat it, clinicalized that very intimacy in their case notes. For the most part, Gerhard’s case notes were clearly written for an audience little interested in the particulars—the intimate details—of a patient’s life. What little backstory Gerhard provided spoke to the factors that predisposed a particular patient to falling ill with typhus. In this sense, the notes

411 Ibid., 317-319.

412 This sentence paraphrases Johanna Hedva’s argument that “to stay alive, capitalism cannot be responsible for our care—its logic of exploitation requires that some of us die.” See Hedva.
represent an intensification of the clinical gaze embryonically present in the case notes of Samuel Jackson and others writing about cholera. Because they were more intensely clinical, Gerhard’s notes were also more intensely intimate. Michel Foucault outlined his own framework for understanding such practices of clinical intimacy in *The Birth of the Clinic*: “the mutation that made it possible—and which continues to do so every day—for the patient’s ‘bed’ to become a field of scientific investigation and discourse is not the sudden explosive mixture of an old practice and an even older logic, or that of a body of knowledge and some strange, sensorial element of ‘touch’, ‘glance’, or ‘flair.’” The doctor’s “intervention is an act of violence if it is not subjected strictly to the ideal ordering of nosology,” based on the logic of the clinic.413 In other words, the clinician classifies, and classifies through intimate observation of patients. This institutional classificatory scaffolding worked to allegedly avert the violence of intimate medical intervention. But Foucault’s dismissal of a sensory component to the clinic suggests a mutual exclusivity between clinical spaces and intimate spaces, which is not borne out by historical fact. Rather, it was in the suffusion of intimate spaces with scientifically rooted sensory observations that the birth of the clinic lay, when the patient’s bed was at one and the same moment a site of intimate observation and scientific inquiry. Hence the preoccupation of physicians with temperaments and temperatures, observable symptoms and symptomatic remedies, bodily fluids and fluid bodies. By 1836—if not by 1832 or

413 Michel Foucault, *The Birth of the Clinic*, xv, 8.
1793—the clinic had matured, but no matter how much justification the clinic’s intimacy drew from the desire to classify, it still presented as intimate bodily observation. Part of the maturation of the clinic was a professional project. Professional physicians of the time worked to differentiate their practice from that of quacks, midwives, and even nurses and attendants through this project of clinicalization. After the first cholera outbreak, the medical profession suffered what historian Owen Whooley has described as “a professional crisis of epistemological proportions,” as the disease “forever altered the medical landscape,” leading to the proliferation of alternative medical sects. By the 1830s Philadelphia was the epicenter of the American wing of the homeopathy movement, a German school of medical practice that vehemently countered the strong doses of mainstream, or allopathic, medicine. Homeopathy’s German founder Samuel Hahnemann wrote of the “horse cures” given by many mainstream physicians, which “have the power to cause so much harm and therefore shouldn’t be used or imitated.” Others supported Thomsonianism, a homegrown American medical

414 The roots of this clinicalization extended at least as far back as 1804, when Phineas Jenks, in defense of a doctrine of noncontagion, wrote that, “[d]uring the prevalence of epidemics, physicians are in great demand, and those who believe in the doctrine of contagion must constantly labour under apprehensions for their own safety whenever they enter the rooms of their patients. The consequence of which must be, that they can obtain but an imperfect knowledge of the situation of the sick.” See Phineas Jenks 51.


sect that celebrated a democratic vision of medicine. Samuel Thomson, the movement’s founder, preferred the colloquial term “spotted fever” over the “typhus” spoken of by more learned folks. Historian James Whorton has argued that “Thomson’s appeal to the masses” stemmed from his message that anyone could practice medicine. However, historian John Haller has contended that Thomsonianism was destined for failure because of its founder’s polarizing attitude: Thomson “had a highly individualized conviction of himself and his system and insisted that others conform to his ways—a contentious-breeding attitude, which eventually undermined the full impact of his system.”

Meanwhile, mainstream physicians like John Boyd of Kentucky expressed extreme mistrust of uneducated quacks and even attendants. Boyd urged his colleagues to be as ever-present at the patient’s bedside as possible, complaining that “[i]t is useless to talk to the people, about the state of the system; of which they know as much, as they do of Hebrew.”

In 1836, some physicians still believed typhus and typhoid—or typhus gravior and typhus mitior—to be different manifestations of the same disease, despite the efforts of Louis, Chapman, and others to prove the distinction invalid. Emergent clinical settings provided space in which physicians could justify intimate care practices that might otherwise have been perceived as violations of bodily privacy—autopsies, for instance, of

gemeinen Mannes Pferdecuren genannt), die, so viel Harm sie auch machten, doch durchaus keine Nachahmung verdienen …” Translation by Abdul-Aliy Muhammad.

418 Whorton 37.
which Gerhard performed many in an effort to better understand the 1836 epidemic. Some medical students, including Charles Bedford of Alabama, lamented their lack of experiences with “autopsical examinations of the dead,” but nevertheless concluded on the basis of premortem examinations that the two classical varieties of illness known as typhus mitior and typhus gravior fit under the umbrella category of typhus, and that the disease itself was “a mixture of inflammation and congestion, with the latter predominating.”  

To Gerhard, the evidence gleaned from his autopsies was irrefutable: “The fact that the morbid changes pathognomonic of dothinenteritis, are not met with in the typhus fever, would of itself seem conclusive that the two diseases are no more identical than pneumonia and pleurisy.” Gerhard concluded that typhus, under its many monikers, “is not attended with ulceration or other lesions of the glands of Peyer.” On the other hand, according to Gerhard’s findings, intestinal lesions pointed to a case of typhoid; their absence eliminated it as a possible diagnosis. Both Gerhard and Pennock had had plenty of experience studying the glands of Peyer. Their professional associates certainly knew of their interest in this anatomical structure. In 1833, Pennock had received a rather strange macaronic letter from Boston physician and fellow Louis student James Jackson: “Could you believe it,” Jackson wrote in French, “my glands of Peyer have been inflamed for five weeks.”

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422 Gerhard 292, 302-303.

423 Letter from James Jackson to Caspar Wistar Pennock, Dec 5th 1833, C. W. (Caspar Wistar) Pennock Papers, 1829-1891, Mss.B.P3825, American Philosophical Society
By the 1840s, Gerhard’s findings had begun to take hold, though many physicians continued to see typhoid and typhus as closely linked. Although Alabaman medical student Alexander Wilkins celebrated the extinction of “the many exploded and wild hypothesis [sic], that prevailed among the ancients,” he surmised that the mucous membranes of the alimentary canal were among those parts most affected by inflammation in cases of typhus. While Wilkins noted the common presence of telltale petechiae in the cases he observed, he also remarked that “[o]n post mortem examinations, the alimentary canal is, always, found to bear the marks of an highly inflamed state; often putting [sic] on a sphacel, or ulcerative appearance,” indicative of a pre-Gerhardian holdover of conflating typhus and typhoid.424

The problem was that American physicians had relatively few chances to witness typhus firsthand.425 For his part, even nearly a decade after the publication of Gerhard’s observations, Buffalo-based physician Austin Flint “incline[d]” to see typhus and typhoid as “of so kindred a nature as to denote the same disease under somewhat different aspects,” though “it is convenient and useful to make the distinction” whenever possible. Treatments that worked for one “aspect” might not suffice—might even prove injurious—in cases of the other. Flint concluded that, “while all must acknowledge that

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they are in nearness of kin—cousin-germans—we are disposed to regard them as even more closely allied to each other, being, if not one and the same individual, at least pathological twin-brothers.”

In 1840, British physician George Leith Roupell, who served at St. Bartholomew’s Hospital, described his experiences caring for typhus patients in his *A Short Treatise on Typhus Fever*. Proper understanding and treatment of typhus, according to Roupell, required experience with flesh-and-blood patients, not just knowledge gleaned from books, though he made it quite clear to his readers that he had plenty of both. Roupell acknowledged the confusion surrounding typhus’s nomenclature. He admitted that the name of typhus “has been used by authors to designate diseases entirely different in their type and origin, … and many contrary opinions are entertained upon the subject.” It remained, then, “to define accurately the malady to which the term should be restricted, and at the same time assign to it a proper nosological position.” Once the disease could be adequately understood and classified according to the principles of nosology, physicians could properly treat it. With that in mind, Roupell acknowledged that there was significant debate regarding the efficacy of bleeding in treating typhus, but while he believed it deleterious “in a late stage” of the disease, he supported bleeding in typhus’s early stages. Roupell heartily approved of the use of emetics, and sang their praises: “The object of vomiting in typhus is to produce a powerful nervous impression, and by occasioning a sort of shock to the system to excite a new action in the frame, and undoubtedly great benefit follows its employment.” Like Hildenbrand, Roupell favored

the use of stimulant medicines. Roupell considered a “well timed” blister to be “a most valuable assistant,” and employed them as stimulants. And although cold affusion over the surface of the body could be counterproductive, Roupell contended that, “[i]n certain periods of the year, however, and in warmer climates, such a plan may be advantageous.”

Roupell postulated the existence of an infectious agent that caused typhus by attacking the tissues of the body in succession, “which regular implication of different organs would lead to the inference that irritation rather travels through the vessels, than is excited by an impression from the blood, which would act nearly simultaneously on all parts of the vascular parietes.” The intimacy between caregivers and patients posed a dilemma, then, for “[i]t is scarcely possible but that medical men, students, nurses, and others in attendance upon typhus patients, must almost daily have their systems saturated with the infection.” Indeed, he reported that nearly every nurse at St. Bartholomew’s Hospital fell ill with typhus while caring for the sick. Roupell noted that some physicians, like John Haygarth, famous for his work on the placebo effect, speculated “that the distance at which diseases can be communicated by infection extends only to a few yards.” Fair enough, but Roupell maintained that “even this distance can never be kept between a medical man and his patient. The pulse must be felt, the state of the abdomen ascertained by pressure, percussion of the chest and even auscultation must be performed,

and that not only at the back, but in the front, and as well at the lower as the upper lobes of the lungs.”

The advent of modern medical devices provided only the thinnest protection against infection, for “anxiety to arrive at truth, and willingness to bring all our own senses to aid the investigation, induces us often to throw aside the stethoscope, and, that the ear may not possibly be deceived, it is at once brought into contact with the body, separated from it only by a fold of linen.” Clinical knowledge of the body relied upon intimacy between the physician and the sick, dying, and dead. It called for “the hand of the practitioner” to come “in contact with the skin of the sick.” It called for a level of intimacy such that the practitioner “can scarcely avoid inhaling breath just emitted from the disordered lungs, and remains at each visit many minutes in the vicinity of the patient’s bed.” This intimate exposure was enough “that his system must become charged with the virus”—in this case, typhus—particularly considering the fact that the physician “examines not one case a day, but many, not on one day alone, but every day for weeks, for months, nay, for years together.”

Importantly, historian Charles Rosenberg has reminded scholars that “[t]he American physician in 1800 had no diagnostic tools beyond his senses”; Roupell’s lament serves as an equally important reminder that the senses remained the paramount tools of diagnosis for professional physicians into the mid-nineteenth century.

428 Ibid., 31, 105.
429 Ibid., 105.
The effects of typhus on the minds of patients could be deeply distressing, both to the patients themselves and to their caregivers. Roupell recalled the case of twenty-six-year-old Margaret Halley, admitted to St. Bartholomew’s on June 8th, 1838: “she believed that she was already dead, that she had been so indeed for many days, and her constant request to be buried was impressive and painful.” But it was the morbid changes in anatomical structures, rather than those of the mind, that most interested Roupell. According to Roupell, “[f]ew morbid changes in typhus are more constant than those in the lining membrane of the lungs.” By emphasizing the diseased condition of the lungs of typhus patients, Roupell tentatively hinted at the findings of Gerhard, which proved that the disease did not produce intestinal lesions. But Roupell still held onto an association between typhus and the bowels, as evidenced by his support of the use of purgatives in treating the disease, which even some pre-Gerhard physicians like Hildenbrand had disavowed. For his part, Roupell found Hildenbrand’s objections “difficult to understand,” for he found the use of purgatives “most decidedly beneficial.” Roupell explained that purgatives worked “to remove from the bowels disordered and pent up secretions, or any undigested food which can serve as a means of irritating the mucous membrane,” as well as “to obviate any tendency to constipation,” with the added benefit of “acting generally upon the system as an antiphlogistic remedy, or method of reducing undue strength or excitement.”

In his 1842 medical school dissertation, George Dennis of Maryland held that the term typhus was a misnomer, because the disease was not always attended with “nervous

431 Roupell 98, 117, 133.
derangement.” He still considered typhus mitior and typhus gravior the same disease, with the latter possessing the same symptoms as the former except “in a more aggravated degree.” In any case, typhus was marked by, among other symptoms, subsultus tendinum and petechiae, but the disease, Dennis said, was never contagious, departing from Chapman’s view. In addition to marsh miasma and other exciting causes, “we can make an artificial Typhus Fever (so says our distinguished professor D[r]. Chapman) by the mode of treatment in a nother [sic] form of fever.” While typhus mitior and typhus gravior were readily confused, “once fully established” typhus was easily recognizable. However, “[w]hen a fever for instance a Billious Fever has assumed a very low stage, and is accompanied with some of the symptoms of Typhus, it is called Typhoid fever and finally may be converted into Typhus Fever.” Dennis did not apparently cite Gerhard, although like Gerhard he believed in the curative power of “a nutritious diet.” Unlike Gerhard, Dennis believed that “[t]he primary seat of the disease is in the mucous membrane of the stomach,” but through sympathetic connections it “involves other organs viz. the brain.” This could be avoided through the use of an emetic “in the forming stage,” which remedy “acts by removing the morbid impression from the stomach before it has extended its influence to other organs.”

The same year, Massachusetts physician Elisha Bartlett penned *The History, Diagnosis, and Treatment of Typhoid and of Typhus Fever*. By the time of Bartlett’s writing, much of the formerly established work on idiopathic fevers was “fast becoming

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432 George R. Dennis, “An Essay on Typhus Fever” (1842), 378.748 POM 1842.1.8, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 1, 3-5, 7-9, 11, 13, 18.
obsolete,” thanks in part to the interventions of people like Gerhard. Still, the juxtaposition of the two diseases spoke to the continued confusion surrounding them and the need for additional clarification. Of typhus, Bartlett lamented that “no entire and elaborate histories of the disease have ever been published.” As a result, “[t]yphus fever is more frequently confounded and mixed up with other diseases, by its best historians, than typhoid fever is; and in this way another element of incompleteness and confusion is introduced into its history.”

When it came to typhus, “the past sheds but a confused and uncertain light.” Despite the confusion surrounding typhus, “there is a good degree of agreement in regard to some of the leading points in its management.” Bleeding, for instance, was generally deemed helpful, especially in moderation. British physicians were “almost universal” in their employment of purgatives, but Bartlett doubted the effectiveness of “active and drastic purging” based on “the opinions of the best modern observers.” On the other hand, affusions and ablutions both worked wonders, especially the latter. Stimulants and tonics were both helpful, and “[d]iaphoretics seem to be of considerable service in allaying the intensity of febrile excitement.” And while Bartlett generally questioned the efficacy of emetics, “[w]hen bronchitic or pneumonic complications have not been removed by the remedies already spoken of, resort may be had to vesication, and to the guarded use, internally, of ipecacuanha and antimonials.”

Like Gerhard, Bartlett believed that typhus could be contagious, without espousing a hardline contagionist perspective—“the same poison,” he reminded his

433 Bartlett v, 183-184.
434 Ibid., 234, 313, 317, 319-324.
readers, “may be generated by other agencies; amongst the most active of which seem to
be the crowding together in close, unventilated apartments, amidst accumulated personal
filth, of the wretched and suffering poor.” Hence why the disease only infrequently
attacked persons of status—but when it did so, it struck with much greater force, driven
by the power of contagion. And while Bartlett acknowledged that immigrants were
“somewhat more liable” to contract the disease, he claimed that “this circumstance has so
little influence” that it was scarcely worth mentioning. It was not a person’s status as an
immigrant that predisposed them to typhus, Bartlett argued, but rather the conditions in
which a person lived, be they an immigrant or not.435

Bartlett remarked that physicians often referenced the peculiar and recognizable
odor of a typhus patient, but rarely attempted to describe it, though “Dr. Gerhard is more
explicit upon this point. He says, that this peculiar odor was pungent, ammoniacal and
offensive; especially in severe cases, and in fat, plethoric individuals.” The smell of a
patient’s body often proved instructive in identifying and classifying diseases. A typhoid
patient’s odor, “when perceived at all, … is usually in the latter period of grave cases,
and is then of a stale, cadaverous character,” much different from the “more common and
more striking” sharp odor emanated by the bodies of typhus patients, reminiscent of
ammonia.436 Furthermore, a patient’s smell indicated the degree to which a disease was
contagious. On February 12, 1825, Abraham Bitner, a student of Chapman, had written in
his notes that “the sphere of the distance that the contagion [of variola] is taken no further

435 Ibid., 227, 236-237, 261.
436 Ibid., 189, 268.
than 8 or 10 feet. So far as the disease can be smelled it is said the contagion will be taken.”

The sensory component of clinical intimacy served the interests of physicians when numerical data proved inadequate; sensory data provided information that could not be reduced to numbers. Physicians could not quantify a typhus patient’s smell, for instance, but they could observe and describe it. In other words, noses were important to nosology. Even the collection of data, numerical or otherwise, for nosological purposes required physical and sensory exposure to patients’ bodily fluids and excreta.

Categorizing diseases meant observing the colors, textures, and smells of patients’ stools; smelling and assessing the temperature of patients’ tongues, breath, and skin; performing autopsies on dead patients. These processes of data collection, not to mention the intimate care practices adjacent to them, which otherwise would have been considered violations of privacy, theoretically acquired legitimacy when physicians performed them in clinical spaces—but, crucially, such spaces were still intimate. Between the 1790s and the 1850s, the spaces in which clinical intimacy took place varied in name—“lazaretto,” “hospital,” “almshouse,” “prison”—but functionally, these institutions often came to serve similar purposes of categorization, compartmentalization, and confinement.

Yellow fever, cholera, and typhus were integral to the development of the physician-patient relationship in the nineteenth century. Ascertaining details of an individual case, which in turn allowed physicians to revise their understandings of and approaches to the disease in question, required intimately knowing the patient’s body before, during, and after illness, as well as the patient’s habits. Here, the medical inspections performed at institutions upon new and prospective inmates came in handy; in the event that an inmate later fell ill, the institutional physician could assess the conditions of the inmate’s body under illness against the conditions in health. In this sense, institutionalized patients were the ideal testing ground for new approaches to the medical ethics of intimacy, providing institutional physicians with a diachronic view of patients’ bodies to which patients could not effectively object.438

As physicians grappled with understanding diseases that posed newly heightened levels of threats like yellow fever and typhus, as well as entirely “new” diseases like cholera, they relied upon clinical observations of patients both living and dead. These observations primarily occurred in institutional settings. During the 1830s, Philadelphia’s institutional physicians adopted the anatomical-clinical model developed by the Paris

438 See, for example, Annual Report of the Acting Committee of the Philadelphia Society for Alleviating the Miseries of Public Prisons 29-30.
Clinical School in the 1820s, using the bodies of their patients to produce new knowledge about diseases. The institutions staffed by these physicians disproportionately took in Black inmates. Sick and dead institutionalized bodies, especially the bodies of people of color, formed the cornerstone of the intimate clinic’s success and survival.439

In order to be treated, patients first had to be confined, restrained, or otherwise rendered tractable. Institutional medicine required patients to confide in their physicians as if they were in an intimate emotional relationship with them. Under such circumstances, patients were not free to direct the course of their treatment, thereby reinforcing the authority of professional physicians. Patients of the early nineteenth century had to be reminded not to withhold important information about their morbid sensations out of shame, especially about the bad habits that might have led to the illness. Patient acquiescence to physician authority was a learned behavior, and one that was critical to the professionalization of American medicine during the nineteenth century. Successful institutional medicine rested, in other words, on a kind of uncomfortable intimacy that replaced intimacy between inmates with intimacy between individual inmates and their supervisors. This substitution was a form of social control, and a form of coercive care, but also represented a shift in the power dynamics of intimacy. The coercively intimate nature of Philadelphia’s carceral and caretaking institutions was thus

439 As Gwenda Morgan and Peter Rushton have shown, “the gradual adoption of disciplined incarceration for the sick, the mad, and the deviant … led to systematic bodily inspection and recording for official purposes.” By the early nineteenth century, “[a]s the punishments or treatments increasingly involved creating ‘docile bodies’ for the changing of recalcitrant minds, knowing the bodies of the deviants became part of the science of their character and background rather than a precaution against escape.” See Morgan and Rushton, 54-55.
not wholly at odds with these institutions’ existence as public health institutions. On the contrary, each facet supported the other.440

The Pennsylvania Hospital, like other similar institutions, relied upon the sick and dying bodies of the poor for its very existence.441 By the 1830s, the process of admission into Pennsylvania Hospital required navigating a sea of red tape. The prospective patient had to request admission from an attending physician, who then examined and attempted to diagnose the patient. If the attending physician felt that admission to the hospital was appropriate, the attending managers would “settle the terms of admission, and grant their order directing the steward of the Hospital to receive the patient.” For seamen and

440 See A Code of Medical Ethics of the American Medical Association 12.

441 Similarly, in his 2004 monograph Venereal Disease, Hospitals, and the Urban Poor, Kevin Siena described the conditions at London’s Lock Asylum for Penitent Women, built in 1787 as “a sister institution” of the Lock Hospital: “Here women recently treated for the pox in the Lock Hospital were confined to undergo a rigorous campaign to save their souls.” Siena argued that “[t]his proved to be the first in a long series of projects that sought over the next century and a half to merge the hospital with the penitentiary, incarcerating working class women in the name of public health.” See Kevin P. Siena, Venereal Disease, Hospitals, and the Urban Poor: London’s “Foul Wards,” 1600-1800 (Rochester, N.Y.: University of Rochester Press, 2004), 9. Again, sick women’s bodies were at the center of the institution’s mission. Furthermore, in her 2018 monograph Asylum to Prison, Anne E. Parsons explored the intertwined histories of mental hospitals and prisons. Parsons contended: “mental hospitals in the mid-twentieth century were carceral spaces—sites of social control that limited people’s freedom.” See Anne E. Parsons, From Asylum to Prison: Deinstitutionalization and the Rise of Mass Incarceration after 1945 (Chapel Hill, N.C.: University of North Carolina Press, 2018), 9. While at least nominally public health spaces, mid-twentieth-century mental hospitals functioned carceral as well. Their patients were essentially inmates, treated in many if not most cases against their will. The patients in such institutions experienced coercive care. Borrowed from the work of Swedish utilitarian philosopher Torbjörn Tännsjö, the term “coercive care” here refers to care given in a context when the patient is not in a position to consent to treatment. See Tännsjö. Like the inmates Parsons studied, the inmates of Philadelphia’s eighteenth- and nineteenth-century hybrid carceral/public health institutions also endured coercive intimate care, especially during epidemic disease crises.
victims of accidents, the process was somewhat more straightforward; seamen only needed the approval of an attending physician and the Collector of the Port. Accident victims were automatically accepted into the hospital, “provided the accident occur[red] in Pennsylvania and the sufferer is brought immediately, or within twenty-four hours,” and the patient “requir[ed] surgical aid.”

The Hospital operated on the philosophy that “[e]mployment [including avocational activities] is … beneficial in all cases, except of acute delirium;—where cure is possible, it conduces to it; and where this is not even hope, labour ensures sound repose and a general tranquility, which is rare in the unemployed.” An occupied patient was a happy patient, or so the reasoning went. Productivity also provided concrete material benefits to the Hospital, allowing it to be self-sustaining in certain ways. The Pennsylvania Hospital, like similar institutions, relied on the labor of its inmates, both operationally and objectively. Not only did the labor performed by inpatients support the institution’s operation, it was demonstrative of the success of the Hospital’s twin missions of physical cure and moral reform by taking nonproductive and indigent persons and molding them into healthy, productive, and contributive members of civilized society. But sick, and even dead, patients performed another form of labor within the Hospital, labor crucial to the intimate clinic. It was these patients’ bodies that institutional physicians carefully examined in order to better comprehend how epidemic diseases functioned, and how best to treat them. Without the sick and dead bodies of the institutionalized poor who comprised the Hospital’s patients, the anatomical-clinical

442 Malin 6.
443 Ibid., 18.
synthesis upon which clinical intimacy was founded could not have persisted.

Institutional physicians like William Gerhard counted on the probability that some of their patients would die, and with the violently intimate brand of care typical of the clinic, these physicians made meticulous note of postmortem observations of the patients’ dead bodies, juxtaposing these observations with their premortem case notes in order to draw what they believed were more accurate conclusions about the nature of the disease in question, and of the human body broadly.444

Although they shared the designation of “sick poor,” during the 1820s and early 1830s, just before the ascendance of the anatomical-clinical synthesis in the United States, the patients at the Pennsylvania Hospital were otherwise a diverse crowd. While the vast majority of patients were U.S.- or Irish-born, patients originated from places as far-flung as Mauritius and China.445 A slim majority of the patients at the hospital over the first eighty years of its existence were considered poor—15,293 out of 29,616, or roughly 51.6%—and thus did not have to pay for their admission.446 In this sense, the Pennsylvania Hospital was right in claiming itself to be a charitable institution. The most

444 See John Harley Warner, Against the Spirit of System, 4.

445 Between 1824 and 1832, 7701 patients were admitted to the hospital: 4486 of those were from the United States, 2173 were from Ireland, 448 were from England or Wales, 162 were from Germany, 103 were from Sweden and Norway, 83 were from Scotland, 69 were from France, 41 were from parts of Scandinavia excluding Norway and Sweden, 28 were from Canada (including Nova Scotia and Newfoundland), 22 were from the West Indies, 20 were from Prussia, 14 were from Italy, 4 were from Africa, 4 were born at sea, 3 were from Brazil, 2 were from other parts of South America, 2 were from the East Indies, 2 were from China, 2 were from Mauritius, and 1 was from Mexico. See Malin 46.

446 Ibid., 14.
common cause for admission was “insanity” (3,718), followed by syphilis (3,204). 447 Two of the most disparaged groups of patients were also the institution’s most numerous. 448

The preponderance of “insane” patients spurred the creation of a separate department for mentally ill patients. In 1840, Pennsylvania Hospital opened its Department for the Insane in West Philadelphia, near Blockley. The establishment of an insane department in 1840 represented a project of cordonning off the study of the mind from the study of the body, while simultaneously recognizing that maladies of the mind could produce physical symptoms that required medical management. The effective

447 Ibid., 33-35.

448 A third group—just as culturally salient, if not as numerically significant—found refuge in the Hospital’s lying-in department. While the Overseers of the Poor had long provided temporary relief to impoverished pregnant women, by 1803, the Pennsylvania Hospital had its own separate lying-in department “for the accommodation of poor married women, of respectable character,” that by the 1830s housed “upwards of seventy” women each year. See An Account of the Rise, Progress, & Present State, of the Pennsylvania Hospital 3-4; Wulf 165. The Hospital’s lying-in department traced its origins to a 1793 act of the Pennsylvania legislature that granted over $26,000 to the Hospital for the purposes of creating “a lying-in and foundling hospital,” thereby “extending the usefulness of the institution.” The act declared that “the relief of unfortunate women labouring in child-birth, and not able to provide for the expences necessarily incident thereto, and also the misfortunes of suffering and forsaken infancy, are objects very deserving of some humane provision.” See “An Act for extending the benefits experienced from the institution of the Pennsylvania Hospital,” in Laws of the Commonwealth of Pennsylvania, from the Fourteenth Day of October, One Thousand Seven Hundred, to the Sixth Day of April, One Thousand Eight Hundred and Two (Philadelphia, Pa.: Francis Bailey Lancaster, 1803), 273, 277. Clearly, the state legislature considered the establishment of a lying-in and foundling department a priority. And yet, a full decade passed before its establishment. Why it took so long is not exactly clear, but the creation of the lying-in department signaled a transition away from midwifery and toward professional obstetric medicine, part of a greater trend toward specialization among professional physicians. See Thomas G. Morton and Frank Woodbury, The History of the Pennsylvania Hospital, 1751-1895 (Philadelphia, Pa.: Times Printing House, 1895), 232-235.
treatment of mental illnesses, much like that of physical ailments, required that the physician was intimately familiar with the patient’s mind and body, preferably both before and after the illness arose. This model of care subverted established informal systems of community care for the mentally ill, replacing the intimacy of the family with a more coercive form of institutional intimacy.449

Malin served as the Department’s steward and provided organizational support.450

The young doctor Thomas S. Kirkbride, who had graduated from the University of Pennsylvania in 1832, served as the institution’s principal physician. Kirkbride beamed that “our improved accommodations, and increased facilities for controlling the Insane, have enabled us in many cases, to dispense with means of restraint that had previously been deemed necessary.” Kirkbride elaborated that the most common form of restraint

449 James E. Moran, “Asylum in the Community: Managing the Insane in Antebellum America,” History of Psychiatry 9, no. 34 (Jun 1998): 229; Yanni 55. Historian of nursing Christopher Maggs has argued that, between 1750 and 1850, “industrialization forced a growing separation of work and home, which contributed to the growth of institutional care for the sick.” See Christopher Maggs, “A general history of nursing: 1800-1900,” in Companion Encyclopedia of the History of Medicine, vol. 2, eds. W. F. Bynum and Roy Porter (London, U.K.: Routledge, 1993), 1315. Importantly, Simon P. Newman has argued that, through the work of “[c]lassifying, restraining, and medicalizing bodies,” wealthy and middle-class Philadelphians “exercise[d] … social power” over their poor neighbors. Institutions like lazarettos, hospitals, almshouses, and prisons were the sites of such exercises. Within the Philadelphia Almshouse, the “deserving” and “undeserving” poor alike “were increasingly judged, incarcerated, and conditioned as a single group of dangerously poor and undesirable bodies.” On the other hand, only those seen as the deserving poor—those for whom poverty was not seen by wealthier Philadelphians as the result of moral failings—were afforded access to the Pennsylvania Hospital; all others were relegated to the Almshouse. Newman asserted that, “whether or not they were admitted and treated, for Philadelphia’s lower sort the Pennsylvania Hospital was as much an instrument of class and social order as it was a refuge for the ill and injured.” See Simon P. Newman, Embodied History: The Lives of the Poor in Early Philadelphia (Philadelphia, Pa.: University of Pennsylvania Press, 2003), 9, 17, 63.

450 Morton and Woodbury 540.
was “[s]imple seclusion in chambers properly secured.” Some patients were additionally restrained with “leather wristbands, secured by a belt around the body, or mittens of the same material, or of canvas,” while “two patients have occasionally been kept on their beds with much advantage, by an apparatus also of leather, but admitting of much freedom of motion.” On the other hand, “[t]he so-called ‘tranquilising chair’ has not been seen in our wards, nor is the muff or strait-jacket among our regular means of restraint.” However, Kirkbride contended that what he called “mild” restraints were “much less annoying to the patient, and effect the object in view with less irritation and more certainty, than the constant presence of even the best instructed attendants.”

Kirkbride alleged that restraints had more benefits than direct observation, but such pretense did not match the sentiments guiding the operation of the hospital. The new institution sequestered mentally ill patients away from physically sick patients, and away from urban corruption of all sorts. Patients at the new institution found themselves under the careful watch of the Department’s staff. Many of the patients were inmates at Pennsylvania Hospital before the establishment of the Department for the Insane, and had not been allowed to leave the Hospital for years. Although “[t]heir removal was effected … without accident or difficulty, and with no noise, or excitement of any kind, likely to attract attention,” no doubt they were exposed during their transportation to the


gawking and heckling of their noninstitutionalized neighbors. However traumatic this journey to a new residence may have been for the patients, early national and antebellum physicians recognized that “[r]easonable indulgence should be granted to the mental imbecility and caprices of the sick.” Some degree of sensitivity was required in treating mentally ill patients, at least at first. In 1851, John Curwen, then superintendent of and physician at the newly established Pennsylvania State Lunatic Hospital in Harrisburg, wrote that “[m]ildness and kindness must characterize every action and every expression.” Caregivers should be sure to exercise “control over the temper, and particularly over that unruly member, the tongue, which often inflicts a severer wound than the heaviest blow.” Curwen urged that attendants should minister to the needs of their mentally ill patients, and “perform any little favours which may be asked and granted without any infringement of rules and regulations.”

Physicians of the time also acknowledged that “many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased.” While mental maladies mirrored morbid sensations characteristic of certain physical ailments, their treatments were often—though not always—distinct. In the late eighteenth century, if not the nineteenth, bleeding, and placement in a well-ventilated space, might have been an appropriate treatment for a feverish delirium, restoring as it did the balance of the body’s humors, but a distracted

453 Kirkbride 36.
455 *A Code of Medical Ethics of the American Medical Association*, 8, 11.
mind would more appropriately be calmed by the close confinement of the straitjacket, despite the fact that a furious delirium displayed many of the same symptoms as a stupefying fever.

When treating mental illness, institutional reformers like Thomas Kirkbride paid careful attention to architectural considerations, and designed large, well-ventilated structures with abundant natural light in order to provide a comforting setting for patients. The idea was to create an environment that fostered moral development, while also enforcing a separation of the patient from the patient’s family. Mental illness, Kirkbride believed, could not be treated at home, and required the creation of an institutional surrogate home, populated by physician “fathers” and patient “families.”

While Americans of the time believed in “[u]niversal susceptibility to mental illness,” according to historian Christopher Beshara, institutional reformers often spoke of an indwelling spiritual and moral potential within every individual—but nevertheless, in some cases, nurturing this moral development required institutionalization.

On both sides of the Atlantic, hospitals operated as carceral spaces. In his 1840 work *A Short Treatise on Typhus Fever*, British physician George Leith Roupell praised

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456 According to Christine Stevenson, psychiatry was “the first [medical specialty] to regard the building as an active therapeutic device,” and as such, “[c]arefully designed, purpose-built asylums would render redundant manacles and other forms of physical coercion and restraint.” The common wisdom of the day, according to Stevenson, held that, “given lunatics’ propensities for drawing faulty conclusions on the basis of external stimuli, their surroundings had to be unambiguously soothing.” See Stevenson 1505-1506. See also Yanni 51-78.

457 Yanni 55.

hospitals—“public institutions for the reception of the sick,” in his words—for their public health achievements. Through their proper management, “the spread of many infectious maladies is arrested and the best means are afforded of relieving the severest afflications of the poor.” He especially applauded the benefits of fever hospitals, “both in London and the provinces … when the alternative is between a patient’s admission into such an establishment and being left at home to contend with disease under every disadvantage of bad ventilation, ill attendance, and want.” Under the clinical model of organization, hospitals provided the salubrious architecture that most homes lacked, aiding the recovery of the sick by confining the patient within a carefully ordered and healthful space.

Insanity interested Roupell greatly. Roupell advocated for the use of restraints “[i]f there is furious delirium, and patients feel the singular inclination for self-destruction, or from great apprehension and mistrust of those about them are likely to attempt it.” A “strait waistcoat” could suffice, but Roupell advised against using it on patients suffering from fevers, or “those disorders in which there is increased temperature of the body, especially where it is desirable to reduce the heat by sponging, &c.” Physicians who followed Roupell’s recommendations favored the use of intimate care practices like bathing the patient’s body, even in cases where a restrictive device like a straitjacket might have been helpful. If the “self-destructive” patient did not labor under the condition of a fever, however, the need for bathing no longer pertained, and physicians were free to direct the use of straitjackets. But Roupell himself was leery of

459 Roupell 5-6, 152.
460 Ibid, 148-149.
the straitjacket. An alternative—indeed, “[t]he mode of coercion employed at St.
Bartholomew’s Hospital” in London—was to bind the patient with “straps which confine
the patient to his bed in a supine posture.” Roupell favored this method over “the old
fashioned method” of the straitjacket, as “there is certainly much less apparent violence
in applying the straps than the jacket.”461 The supposedly greater delicacy of the straps
made them a more desirable and apparently more humane form of restriction in Roupell’s
estimation. If the straps were not in and of themselves conducive to effecting a cure for
mentally ill patients, Roupell argued, they at least promoted tranquility to a greater extent
than straitjackets.

Whatever the method of restraint, confinement was seen as a necessary tool in the
treatment of mentally ill patients. John G. Millingen, a British surgeon, identified three
important considerations to keep in mind when it came to confinement. First, “[t]he
patient’s safety and restoration to health.” Any confinement injurious to the patient’s
health must be avoided. Second, the patient’s “comfort and well-being, whether curable
or not” had to be taken into consideration. Finally, “[t]he security of society” was of
importance in determining the propriety of confinement.462 In 1846, Quaker physician
Charles Evans wrote that “in the great majority of cases, separation from friends, and
seclusion from society, are indispensable to the recovery of the insane; besides which, the
peace of their families, and the well-being of society, demand their restraint.” The
Asylum did permit certain patients “to walk, unattended, in the gardens and pleasure

461 Ibid., 149.
462 J. G. Millingen, Aphorisms on the Treatment and Management of the Insane; with
Considerations on Public and Private Lunatic Asylums, Pointing Out the Errors in the
grounds,” but by and large its operation depended upon confinement and careful observation. Evans contended that, when it came to the architecture of insane asylums, “that plan will prove the best, which, with equal conveniences, combines the most means for introducing well-adapted employment and exercise, with the best arrangement for an extensive classification which can be kept permanently distinct.”

Evans wrote at a time when the question of medical ethics was something of a hot button issue. A standard code of medical ethics did not exist in the United States until 1847, with the foundation of the American Medical Association. The Association chose Nathaniel Chapman as its first president. The aging anatomist was rather out of touch and no longer on the cutting edge of medical knowledge production; his position as president was due more to his legacy as a mentor of so many physicians, rather than to his current practice. The Association drafted a code of ethics based on the work of British physician and medical ethicist Thomas Percival. In his Medical Ethics, Percival cautioned that “[i]n the large wards of an Infirmary the patients should be interrogated concerning their complaints, in a tone of voice which cannot be overheard.” Privacy was not synonymous with intimacy, but in cultivating confidentiality physicians worked to prompt their patients to conceive of the physician-patient relationship as emotionally, in addition to sensorially, intimate. In other words, institutional settings did not preclude physician-patient intimacy; on the contrary, they demanded it. In particular, “females should always

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464 A Code of Medical Ethics of the American Medical Association 6.
be treated with the most scrupulous delicacy.” 465 Hugh Hodge found Percival’s words significant enough to include in his *Notes and References* on medical ethics and professional conduct.466 The American Medical Association echoed Percival’s injunction to confidentiality in their 1847 *Code of Medical Ethics*, adding: “The obligation of secrecy extends beyond the period of professional services;— none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by him [the physician] except when he is imperatively required to do so.” 467 When exactly that would be, the *Code* did not specify, but presumably institutionalized patients did not enjoy the same protections as patients who were visited privately.

By the nineteenth century, historian of medicine Malcolm Nicolson has argued, “[b]eing examined by the doctor became identified as a special form of interpersonal interaction—no longer constrained by normal social conventions, but controlled by ethical standards and modes of conduct established and maintained by the medical profession itself.” 468 The 1847 *Code* urged physicians to “be ever ready to obey the calls of the sick”; in return, “[t]he obedience of a patient to the prescriptions of his physician should be prompt and implicit.” Patients should acquiesce to physician authority, according to the *Code*. But patient compliance was not expected to be unquestioning or

465 Percival 11.


467 *A Code of Medical Ethics of the American Medical Association* 8.

468 Nicolson 818.
absolute. On the contrary, it was the responsibility of the patient to listen only to the orders of a respectable and reputable physician, “regular” in both his habits and “professional education,” and preferably one “who has become acquainted with the peculiarities of constitution, habits, and predispositions” of the patient.469 Again, institutionalized patients—who by and large did not have free choice of who would be their physicians—could not necessarily access familiar physicians who were already acquainted with them.

While “[f]requent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease,” the Code warned that “unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.”470 Superfluous and frivolous visits undermined carefully cultivated professional distance, and stirred potentially hazardous emotions in the patient, threatening to disturb the patient’s mental hygiene. But professional distance, the Code stated, should never be so great as to forestall open and honest dialogue between the physician and patient, especially regarding the patient’s symptoms. The Code advised that “[e]ven the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them.”471 An ethical physician-patient relationship not only left room for discussion of intimate matters, but required it.

469 A Code of Medical Ethics of the American Medical Association 7, 10-12.
470 Ibid., 8.
471 Ibid., 12.
Just as hospitals possessed carceral functions, almshouses, prisons, and jails were designed to serve public health purposes. Such institutions—including the penitentiaries much vaunted by Quaker penal reformers—provided a kind of coercive care designed to mold the characters and behaviors of inmates. During the first half of the nineteenth century, the Philadelphia Almshouse acquired significant public health functions. Even as physicians debated the soundness of the doctrine of contagion as it applied to diseases like yellow fever, many readily agreed on the contagious nature of habits—especially vicious ones. By containing vicious persons, carceral institutions prevented the spread of such habits to members of the general public. Prison reformers also sought to design institutions that cured individual prisoners of their moral diseases. Within almshouses, penitentiaries, and other carceral institutions, inmates were simultaneously prisoners and patients, with little to no control over the terms of their care. These terms required intimate interaction between caretakers and inmates, but were institutionally supported by being written into laws and institutional bylaws.

The Almshouse depended upon inmate labor to operate and inmate bodies to generate new medical knowledge. In return, the Almshouse provided inmates with temporary shelter and certain forms of medical care. In the 1820s and 1830s, the Almshouse was the source of numerous dissections performed by clinical researchers like William Horner and William Gerhard, whose intimate access to incarcerated victims of disease afforded them insight into the operation and classification of diseases like cholera and typhus. As American physicians who had studied in Paris returned to the United States to practice medicine, they brought with them the principles of the Paris Clinical School. As a result, anatomical dissection became the most esteemed method of learning
among medical educators, as it theoretically allowed medical students to carefully observe firsthand the workings of the human body, as well as the morbid influences of disease upon it.\footnote{472}

By the 1820s, the Almshouse’s rule against admission of persons affected by infectious diseases had been sufficiently relaxed to allow the treatment of infectious diseases within the Almshouse’s medical ward. In 1824 Abraham Bitner, a whimsical young student of Nathaniel Chapman, recorded several cases of illness at the Almshouse. For example, forty-year-old Jacob Cloron “was admitted into medical ward” with what Bitner identified as a case of typhus. Bitner noted that “his habits were intemperate & he suffered much from cold.”\footnote{473} The patient exhibited worrisome symptoms, including a thready pulse, a “greatly suffused tongue loaded with brown,” a “stight [sic] subsultus,” cold arms, gangrenous feet, and vomiting. Bitner’s hurried handwriting and lack of punctuation indicate the speed with which he recorded the patient’s treatments: “he was first ordered some brandy toddy and infusion of Serpentaria this developed considerable heat of Surface and raised the pulse he next had an Emetic which in some measure reliev’d him the heat again rising he was several sponged with cold water & with advantage.” Later, “his feet were bathed with brandy [and] the Spts Turpt. and afterwards

\footnote{472} Rachel Ponce has noted that “physicians and demonstrators of anatomy vociferously defended an intellectual commitment to the cadaver as epistemologically superior to all other forms of anatomical learning,” though she has questioned the validity of these anatomists’ claims, asking, “was this belief in the epistemological superiority of the cadaver truly justified?” See Ponce 336.

\footnote{473} Bitner 24. A brief rushed entry indicated that when Isreal Harrison was admitted to the Almshouse in December of 1824, “[h]e state[d] that about 4 or 5 months ago he was taken with vomiting of bilious matter and sharp cutting pain at the umbilicus.” Whether or not he displayed similar symptoms upon his entry into the Almshouse medical ward is unclear. See ibid., 27.
had a blister applied.” Despite the institutional setting, many of the treatments Cloron
experienced centered around intimate contact—being bathed, being sponged, having his
pulse assessed. Following this last treatment, Bitner reported that “[t]he patient feels
much better—he was removed this evening—(Tuesday).”

Almshouses, like hospitals, could function as their own artificial disease
environment in miniature, with inmates suffering from disease outbreaks that raged
violently within their walls, without escaping into the city at large. In the winter of 1823
and spring of 1824, for example, an outbreak of typhoid fever struck the Almshouse. At
the time, the attending physicians at the institution were Drs. John K. Mitchell and
Samuel Jackson. Thomas Lacey Smith, one of the attending medical students, argued that
“[t]he Remote cause appear[ed] to be some noxious matter or effluvia, arising from filthy
or crowded and ill ventilated places.” He believed the prevailing disease was “a disease
sui generis”; although very similar in its presentation to typhus, unlike typhus proper, it
lacked hemorrhaging and was not contagious, and its sufferers remained lucid. In
particularly malignant, fatal cases, it was hard to distinguish the patient’s urine from the
patient’s stool, as both resembled “muddy water.” Smith reported that “sixteen or
seventeen” cases displayed minute petechiae on the skin, much like typhus, and Jackson
believed these cases to be “essentially different” from the others.

474 Ibid., 24-25, parenthetical in text.
475 Thomas Lacey Smith, “An Account of the Typhoid Fever; Which Prevailed at the
Alms House in Philadelphia During the Spring of 1824” (1824), 378.748 POM 18.9,
Kislak Center for Special Collections, Rare Books and Manuscripts, University of
Smith’s conclusions were primarily based on his premortem observations of patients, and what was told to him by Jackson and Mitchell; Smith only had opportunity to see one postmortem examination. Patients were treated by having their heads shaved and dry-cupped, and their diets were strictly controlled. Often the physicians resorted to blisters, but in some cases “it was almost impossible,” Smith noted, “to produce external irritation by any means, the disease within, being so violent, that it appeared to destroy the susceptibability [sic] of the skin, to the action of the most violent irritants which could be applied.” Although Smith described this outbreak of typhoid as “very fatal” in the Almshouse, he believed that the patients would have fared better in “a more healthy situation,” arguing that “[t]he impure air of a crowded ward, the noise and bustle occasioned by so many persons, and the neglect or ignorance of uninterested nurses, all contributed to render the chance of recovery very precarious.” The human body was, in Smith’s estimation, “a vast and complicated machine.”476 Its workings were mysterious at first, but readily predictable to the learned observer—hence the need for careful and intimate pre- and postmortem observations of patients.

As cholera threatened to beset Philadelphia, the attending physicians of the Almshouse Infirmary included John Rhea Barton, F. S. Beattie, Nathaniel Chapman, William Gibson, Richard Harlan, Hugh Hodge, William Horner, Samuel Jackson, Samuel Morton, and Henry Neill.477 Of these men, at least four—Chapman, Harlan, Horner, Jackson—wrote relatively extensively about gastrointestinal ailments after the cholera

476 Ibid., 15, 18-22, 25.
In addition, Morton provided commentary in the American version of John Mackintosh’s *Principles of Pathology, and Practice of Physic*, a tome that emphasized the centrality of the gastrointestinal system to a wide variety of diseases. Other physicians, like Gerhard and Pennock, were similarly inspired by the cholera epidemic of 1832 in their researches into the gastrointestinal system. The 1832 cholera epidemic and its prelude sparked a revolutionary trend in anatomical studies toward a pronounced focus on the intestines and their connected structures. It was this trend that allowed Gerhard and Pennock to differentiate typhus from typhoid, and solidly identify typhus as a unique disease, distinct from other fevers like yellow fever. The involvement of this cohort physicians with institutions like the Almshouse intimately exposed them to numerous cholera patients, living and dead, through both intimate care regimes and autopsies, catalyzing their drive toward knowledge production and the ascendance of nosological understandings of disease in later decades.

In his account of the morbid gastrointestinal changes evident during cases of cholera, William Horner recalled the July 30, 1832, case of Manuel Works at the Almshouse, “an idiotic black man, aged forty.” Works presented no vomiting or purging,

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the classic symptoms of cholera, but Horner nevertheless diagnosed Works with the illness. According to Horner, Works “retained for some time self-possession enough to strike at the assistants, who were officiating about him.” Works’s resistance to treatment signaled his displeasure with the way the assistants handled him. His treatment, at the direction of Hugh Hodge, “consisted in uninterrupted mercurial and stimulating frictions, and an injection strong with red pepper.”480 As in other cases of cholera, the treatment of Works’s illness required prolonged intimate contact between caregiver and patient, contact no less intimate—and yet perhaps more coercive—for its having taken place in an institutional setting.

Almshouse inmates, especially people of color, continued to be vulnerable to disease and medical treatment. Between October 1836 and March 1837, at least nine patients identified as suffering from typhus were admitted to the Almshouse Hospital Men’s Receiving Ward, most during January.481 The patients were remarkably similar. All nine men were in their twenties and were described in the ledger notes as having “moderate” or “intemperate” habits. Eight of the nine men were described as Black. The ledger notes did not specify treatment plans for each patient, although one of the patients was transferred to the lunatic ward either for treatment or following treatment.482 This particular patient’s transfer no doubt involved the treatment of his “recalcitrant mind” in

480 Horner, On the Anatomical Characters of Asiatic Cholera 23.
481 Men’s Receiving Ward Register, October 1836 to December 1842, 35-3-7.2, Philadelphia City Archives, Philadelphia, Pa. By mid-1837 the ledger notes did not usually specify the reason for a patient’s entry into the hospital.
482 Ibid.
the interest of creating a “docile body” rather than—or, at the very least, in addition to—a healthy body.483

If the management of the sick poor fostered the emergence of a public health authority, the intimate care of their bodies produced medical knowledge. Manuel Works, Jacob Myers, and H.S. Mulda, as well as the hundreds of patients whom Samuel Jones discussed in his dissertation on the 1820 yellow fever outbreak in Philadelphia, were all almshouse patients at the time of their illnesses and deaths. Accordingly, physicians like Horner, and students like Jones, conscripted these patients’ bodies in order to produce new knowledge about diseases like yellow fever and cholera. Similarly, Gerhard and Pennock drew upon their experiences as almshouse physicians between 1828 and 1830 during their work with typhus patients in 1836. The bodies of the sick poor, like the epidemics to which they fell victim, served as catalysts for knowledge production in the intimate clinic.

As an institution, the Almshouse also relied more concretely upon the employment of a vast assortment of workers. Both as inmates and day laborers, women were vital to the operation of the Almshouse, as well as the fulfillment of its mission of betterment.484 It fell to women, for instance, to maintain much of the tidiness of the

483 See Morgan and Rushton.
484 Monique Bourque explained that “institutions required a cheap and flexible workforce in order to operate with reasonable efficiency, and women provided much of that labor, particularly in household functions within the institution,” and “making labor a fundamental part of the relief process allowed administrators to argue that public funds were being used responsibly to ameliorate the condition of the poor without encouraging the growth of a permanently dependent population. Women were a particularly problematic category of relief recipient both because they were potential mothers of more paupers, and because they were considered especially vulnerable to the moral ill effects of institutional life, so it was especially desirable for relief administrators to demonstrate
Almshouse. The institution’s ordinances stipulated that “[s]ome suitable women, those remarked for their sobriety and good conduct, shall be appointed to the care of the children admitted into the house, whose duty it shall be to wash, comb and dress them every morning, or oftener if necessary, and to keep them free from vermin.” Black women were a particularly important source of labor in the Almshouse. At the end of the year in 1837, there were 129 Black women and girls in the Almshouse, representing more than one in five of the total female population of the Almshouse. By contrast, Black men and boys represented just over one in ten of the Almshouse’s total male population, a ratio approximating that of Philadelphia as a whole at the time. Of the 124 Black women and their children in the Almshouse on December 23, 1837, more than three

that they were doing all they could to employ poor women productively and to guard or reform their characters.” See Monique Bourque, “Women and Work in the Philadelphia Almshouse, 1790-1840,” Journal of the Early Republic 32, no. 3 (Fall 2012): 385. Matthew Pethers observed that “[s]ocial reformers like those who ran the Blockley viewed ‘indoor’ (institutional) relief as a means of educating its recipients about the impropriety of their previous conduct, and attempted to make their wards economically productive by getting them to work at various tasks designed to defray the cost of their maintenance.” See Matthew Pethers, “Poverty, Providence, and the State of Welfare: Plotting Parabolic Social Mobility in the Early Nineteenth-Century American Novel,” Early American Literature 49, no. 3 (2014): 715.

Ordinances 6.

quarters were classified as “temperate” or “moderate” in their habits—suitable laborers in the Almshouse’s daily operations.487

The inmates of the Almshouse, like institutional inmates in general, were a variegated bunch. But beyond their race and sex, most of the Black women and girls in the Almshouse shared one other crucial commonality: almost all of them, in one way or another, were sick. Whether due to “insanity,” intemperance, rheumatism, venereal disease, “debility,” blindness, “idiocy,” “increase of family,” old age, or simple “want of health,” the Almshouse’s Black female inmates overwhelmingly required some form of care for conditions that kept them in poverty. And yet, a substantial portion of them performed labor crucial to the operation of the Almshouse, as cooks, cleaners, seamstresses, and so forth. Nineteen-year-old Mary Braddock, thirty-two-year-old Eliza Price, sixty-one-year-old Arminta Smith—these women, and women like them, were the sick women upon whom the Almshouse depended.488 Without the crucial labor that they performed, the Almshouse could not have operated, and its mission of betterment would have been for naught.489

By this time, the Almshouse had become a thoroughly clinical space, not just categorizing its inmates according to the perceived cause of their neediness, but pathologizing their bodies and minds in order to better justify the extraction of labor, both physical and epistemological, from them. The Black women and children in the

487 “Almhouse Records 1837.” Specifically, 94 women and children were temperate or moderate, and 30 were intemperate or not classed.
488 Ibid.
489 See Hedva.
Almshouse at the end of 1837 ranged in age from two-month-old infants, to centenarians like the blind former slave Ann Taylor. At least ten of the Black women in the Almshouse at the time had been “born a slave,” though this was never explicitly connected to an inmate’s impoverished status. At least two, including twenty-four-year-old Emeline Smith and thirteen-year-old Jane Price—apparently a native of “Hayti”—had spent time in prison prior to their arrival in the Almshouse. The Black women and children in the Almshouse in December 1837 were categorized as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Lunatics&quot;</td>
<td>14</td>
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<tr>
<td>&quot;Insane&quot;</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Old Age&quot;</td>
<td>7</td>
</tr>
<tr>
<td>&quot;Deaf and Dumb&quot;</td>
<td>1</td>
</tr>
<tr>
<td>&quot;Idiocy&quot;</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Blind&quot;</td>
<td>3</td>
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<tr>
<td>&quot;Lame&quot;</td>
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<tr>
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<tr>
<td>&quot;Debility&quot;</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Sickness&quot;</td>
<td>23</td>
</tr>
<tr>
<td>&quot;Lying in Women&quot;</td>
<td>7</td>
</tr>
<tr>
<td>&quot;Children and Orphans&quot;</td>
<td>15</td>
</tr>
<tr>
<td>&quot;Sore Head&quot;</td>
<td>1</td>
</tr>
<tr>
<td>&quot;Boys in the Women’s Side&quot;</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Real Paupers&quot;</td>
<td>35</td>
</tr>
</tbody>
</table>


Of the fourteen “lunatics,” at least eight appear to have performed some kind of labor within the Almshouse, as did at least forty-one other inmates outside the Working Women’s Ward.490

The records of Blockley Hospital’s Black Women’s Ward for 1843 indicate the kinds of treatments given to Black women in the institution. Susan French, a twenty-five-

490 “Almshouse Records 1837.”
year-old Black woman, received “[w]arm bath with solution of chloride sodium” for her headache. Other patients occasionally received “[c]ups to Back” or “nape of neck.” Thirty-year-old Eliza Harrison, who was “taken sick 5 days with pain in back & misery in head” was given a “sinapism to stomach.” She “took a purge which worked a great deal,” although “great pain in liver present.” The attending physician hurriedly noted Harrison’s appearance as she approached death: “eye yellow tongue slightly fured [sic] lips dry and cracked Pulse 100 skin natural great tenderness over liver.” While “[b]randy vomited her,” she “[d]ied at 2 P.M.” on December 14. The treatments these women received closely mirrored those given to Horner’s cholera patients and Gerhard’s typhus patients. The careful attention received by certain body parts—eyes, tongue, and lips—similarly paralleled the experiences of these former patients. Whatever differences may have set them apart, Susan French, Eliza Harrison, Jacob Myers, Littleton Tacle, Margaret Walters, Manuel Works, and innumerable other patients received treatment in institutional settings, where institutional mandates underscored the intrusive nature of medical care, rather than in private settings.

Belief in the possibility of a future free from disease reverberated in the analogous belief of the possibility of a future free from criminality. Just as disease-producing miasma troubled what literary scholar Emily Waples has called the “miasmatic imagination” of the eighteenth and nineteenth centuries, sexual anxiety promoted “paranoid hypervigilance” on the part of reform-minded Americans of the time. The Gothic specter of vice haunted reformers’ sexual attitudes, prompting them to associate

491 Medical Wards, Case Records, Black Women’s Fever Ward, 1843, 35-3-7.7, Philadelphia City Archives, Philadelphia, Pa.
aberrant sex with the transmission of diseases physical and moral. Penal reformers hoped that, since the solitary confinement of penitentiaries would shield criminals from each other, institutions operating on the Pennsylvania system of imprisonment would curtail the contagious power of vice. Eastern State Penitentiary was the archetypal Pennsylvania system institution. Opened in 1829, Eastern State was “situated on one of the most elevated, airy, and healthy sites in the vicinity of Philadelphia,” in Spring Garden, near the City Hospital. Eastern State came of age at the zenith of the penitentiary system. Drawing upon the philosophies of European criminologists, American penal reformers built penitentiary systems that coached inmates to exercise virtuous habits in rigidly controlled settings. By implementing solitary confinement, penitentiaries theoretically expunged physical violence from penal codes, rehabilitating criminals into virtuous members of society. Penitentiaries like Eastern State promised an end to criminal culture, a suppression of the contagion of vice, moral reformation of criminals, and above all, a system of humane treatment of prisoners unmoored from British barbarism.


495 Meranze 3-4.
By the 1820s and 1830s, many of Philadelphia’s carceral institutions had overhauled earlier household models of prison organization, holdovers from the colonial era. In Eastern State and similar institutions, inmates were in theory kept completely isolated from each other and from the outside world. The idea was to prevent the passage of contagious vice from one inmate to another, or from external corruptors.496 In an 1827 letter to Roberts Vaux, Philadelphia Congressman John Sergeant lamented that “[o]ur prisons are schools of vice, where a most finished education is obtained.” Sergeant argued in favor of experimentation with solitary confinement. He allowed that, in some individuals for whom solitary confinement might prove unbearable, “some modification in their favour may be necessary.” However, “[p]unishment ought to be severe, if it is meant to operate at all. People are not sent to prison, to enjoy there the comforts and luxuries of life.” By means of solitary confinement, Sergeant envisioned a society unplagged by crime, due to the system’s deterrence of crime and recidivism.497 Samuel Miller, a Marine officer known for his valiant if ill-fated involvement in the Battle of Bladensburg in 1814, offered a perspective much in accordance with Sergeant’s. In his own 1828 letter to Roberts Vaux, Miller pointed out that some men sentenced to several days of solitary confinement asked to receive lashes instead, which “is an evidence in favor of [solitary confinement’s] adoption.” Furthermore, solitary confinement avoided the unnecessary “degradation which invariably followed the lash,” a degradation not


exactly conducive to reformation, as Miller could only recall “but one [instance], in which a reformation was effected solely by the lash.” Miller did not elaborate on why this instance had such a different outcome than every other, but his point still stood. Solitary confinement achieved what more explicitly corporal punishments could not: reformation, and thus a promise to the extinction of criminality.

Prisons were sites of experimentation, and solitary confinement was the social experiment par excellence. Two predominant penological systems made use of solitary confinement in the nineteenth-century United States. According to the so-called Pennsylvania system of imprisonment, prisoners were kept in isolation from other prisoners day and night, while the Auburn system held prisoners in solitary confinement during the night and forced them to labor in silence during the day. Those interested in penal policies, like Miller, Sergeant, Vaux, and others, hotly debated the respective merits of the Pennsylvania and Auburn systems of imprisonment. While both systems relied on principles of solitary confinement, in the Auburn system convicts spent only their nights alone, spending their days working in a collective space, albeit in complete silence, as opposed to the Pennsylvania system, where prisoners spent almost the entire day in solitary confinement. Penitentiaries following the Auburn system, unmoored by Quaker sensibilities, employed corporal punishment more frequently than Pennsylvania system penitentiaries.499

498 Letter from Samuel Miller to Roberts Vaux, January 8, 1828, in Sergeant and Miller, 7-8.

In defense of the Pennsylvania system, penitentiary physician Franklin Bache argued that solitary (as opposed to “gregarious”) confinement would amplify the feasibility of prison’s goals: “Instead of drowning the sense of [the prisoner’s] disgrace in noise, reckless mirth, and vicious conversation, the silence and loneliness of his [sic] cell deepens the tone of his previous feelings. His heart sinks within him, and he has ample time to scan the course of his past life.” Solitary confinement had an additional benefit: it inhibited—at least theoretically—the kinds of collective action that had plagued Walnut Street Prison, including the tradition of “Blue Monday,” when prisoners stopped working for the day. Bache also found the Auburn system wanting. While he considered the Auburn system “a great improvement” over gregarious confinement as practiced “in most of our prisons,” in his estimation “it does not go far enough; … it leaves something unaccomplished which is essential in the work of improvement.” The solitary confinement of the Auburn system was not solitary enough. Since prisoners worked in a collective space, there were still plenty of opportunities for covert interactions between them: “Even admitting that the Auburn plan precludes intimacy and familiarity, it cannot prevent the prisoners from the mutual observation of each other; and a mere knowledge of one another as inmates of a prison is an evil of very considerable

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magnitude.”

To Bache, the benefits of solitary confinement were obvious: “when it is considered, that many of the individuals sent to our prisons, have been in previous habits of drunkenness and debauchery, the comparative healthfulness of the confinement and mode of discipline must be apparent.”

Even if solitary confinement might have had injurious effects on healthy and virtuous members of society, it precluded engagement in vicious habits, thus actually *improving* the health of vicious persons.

Solitary confinement replaced inmate-inmate intimacy with inmate-supervisor intimacy. Penal reformers of the early nineteenth century identified lust as the precipitating factor in cases of criminality. To this end, as historian Mark Kann has explained, the institutions designed by penal reformers “demanded extensive control over inmate lives,” which included separating male and female inmates from each other, as well as keeping male inmates in isolation from other male inmates. Especially by the 1830s, fears about the polluting effects of masturbation intensified, which required further policing of inmates, especially men, kept in solitary confinement. However, as Kann has illustrated, the primary concern for these reformers was “to rehabilitate wayward white males to virtue and citizenship”; the same reformers often ignored inmates who were Black, poor, or immigrants, and “considered these marginal Americans slaves to sexual desire and virtually incorrigible.”

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502 Letter from Franklin Bache to Roberts Vaux, March 13, 1829, in Bache 12.
504 Kann 279, 287, 290, 295.
In his correspondence, Bache reminded Vaux that “[i]t is a well known fact, that many of the crimes committed by the depraved when at liberty, are perpetrated in prisons, under the system of gregarious confinement. Those that occur to me at this moment are murder, manslaughter, assault with intent to kill, maiming, perjury, theft, concealing stolen goods, gambling, &c. &c.” The elision at the end of Bache’s list concealed sexual offenses behind a sanitized façade of ampersands. Bache stated that “[t]here are some crimes, which may be said to be peculiar to this kind of confinement,” though he did not elaborate any further. Perhaps he meant the sexual intercourse and sexual violence facilitated by gregarious confinement; though of course these acts were by no means exclusive to carceral institutions, Bache and his contemporaries might have at least imagined them to acquire new significance within such spaces.

Under the gregarious confinement system, even reformed and discharged convicts risked contracting contagious vice from antisocial at-large criminals, but, Bache argued, those held in solitary confinement were free from this threat:

The first discharged convict, who may have the benefit of separate confinement, must encounter the danger of being ensnared by this community of offenders, who may, perhaps, be privy to his disgrace through the courts, or some other channel of information; but who can doubt that the ranks of this confederacy of villains would be thinned faster by death and other causes, than it could possibly be recruited by discharged convicts on the separate confinement system.

In other words, criminality might eventually die out under the system of solitary confinement, as it curtailed the establishment of underground communities of criminals.

505 Letter from Franklin Bache to Roberts Vaux, March 13, 1829, in Bache 5.
506 Ibid., 6-7.
Peter Mierckes, president of the prison inspection board, remarked that, thanks to solitary confinement, discharged convicts “will never be able after their discharge to recognize each other, and those who are inclined to pursue a course of reformation, will not be liable to be exposed and branded with infamy, as they now are, by those who have witnessed their degradation.” Furthermore, each prisoner was assigned a number, and these numbers functioned in the place of names. This “admirable arrangement,” according to the state legislature, “prevents one convict from learning the name of another, and prevents that humiliation which invariably pursues a man when liberated, if he is known to have been an inhabitant of a penitentiary.” More importantly, former prisoners “are cut off from association after their discharge, and one convict cannot reproach or recognize another. The more closely this rule is adhered to the better for society, and the better for the unfortunate tenants of prisons.”

Characteristically, physician Charles Caldwell had much to say on the matter. A prickly and combative man—not to mention an ardent racist—Caldwell tutted at his medical colleagues “who do not publicly avow” their adherence to phrenological beliefs, “lest they should be injured in their standing and business.” Intimate phrenological examinations, Caldwell believed, would help overseers and physicians better understand inmates and predict their vicious proclivities. Caldwell acknowledged that phrenology was bound to produce controversy, for “[a]s the hump-backed, knock-kneed, and bandy-legged have an instinctive hostility to the science of gymnastics, it is scarcely to be expected that the flat-heads, apple-heads, and sugar-loaf-heads will be favourably

disposed to that of Phrenology,” a not-so-subtle jab at his anti-phrenology colleagues. Caldwell agreed with jurist Edward Livingston’s argument in favor of reformation by labor and education and discipline. However, Caldwell contended, “the practice of habitually inflicting the punishment of the lash” exerted an “inhumanizing influence on all those who enlist themselves as punishers by profession.” Hence the need to unite phrenological principles with penal reform principles. Only those with appropriate head shapes should be permitted to serve as “an instructor of convicts.”

Humanitarianism guided prison reformers’ approaches to the reordering of carceral institutions. To have placed ruffian-headed men in charge of prisoners—or, worse, to have allowed them to administer corporal punishments—would have violated the sensibilities of humanitarian prison reform, even to a man as quarrelsome and impulsive as Caldwell. On the other hand, to carefully examine the shape and contours of each inmate’s head illuminated the inmate’s character in much the same way that dissections revealed the inner workings of patients’ bodies and the morbid changes produced by the diseases that killed them.

510 Manion 83.
511 Historian Stephen Tomlinson contended that, among phrenologists, “Caldwell came closest to igniting a popular movement.” See Stephen Tomlinson, Head Masters: Phrenology, Secular Education, and Nineteenth-Century Social Thought (Tuscaloosa, Ala.: University of Alabama Press, 2005), 222. Although perhaps more belligerent than most, Caldwell was hardly alone in his public avowal of phrenology. In 1822, John Bell had cofounded, along with Philip Syng Physick and Benjamin Coates, Philadelphia’s American Phrenological Society—the first of its kind in the nation. Phrenology’s popularity tracked, though did not match, that of solidism, and the emphasis on anatomy more generally. Historian Michael Sappol explicitly connected phrenology to dissection from the former’s inception. He wrote that “anatomical dissection is at stage center of phrenology’s founding drama: [Scottish phrenologist George] Combe avowed that his conversion experience occurred after witnessing a dissection of the brain performed by [German phrenologist Johann Gaspar] Spurzheim, which inspired Combe to perform his
A system of meticulous and intimate phrenological examinations could not only guard against contagious vice, but against contagious disease as well. As historian Kristin O’Brassill-Kufan has argued, “[v]agrants, in particular, stood at the nexus of social distrust, fear, and blame as they embodied poverty, criminality, and during the so-called ‘cholera years,’ pestilence as well.” Epidemic disease crises spurred the criminalization of vagrancy, as “the pathologisation of poverty extended to the punishment and incarceration of vagrants” during times of cholera.512 Arch Street Prison primarily housed vagrants and debtors. This was especially true during epidemic disease crises, when cities across the United States endeavored to confine vagrants within the walls of prisons, in an effort to protect more virtuous citizens from the scourge of disease represented by vagrants. O’Brassill-Kufan has asserted that “[v]agrants, according to the [prison] inspectors, experienced greater vulnerability to cholera than did real criminals,” and the common wisdom of the time held that “[t]he distinct constitutions of vagrants’ bodies rendered the facilities where they were held weak.”513

On the other hand, the healthfulness of Walnut Street Prison was something of a model upon which later institutions sought to improve further. The year Eastern State was established, the General Assembly passed a law requiring the institution’s physician to


“visit every prisoner in twice in in [sic] every week, and oftener, if the state of their
health require it, and shall report once in every month to the inspectors.” It was up to the
overseers to report any prisoners requiring medical aid in between the scheduled
physician visits. A prisoner admitted to the infirmary had the physician’s daily care, and
the physician could direct any remedies to be given to prisoners under his care,
“[p]rovided, They shall not be contrary to the provisions of this law, or inconsistent with
the safe custody of the said prisoners.” The power of coercive care, theoretically if not in
fact, did not extend to prisoners who had completed their sentences; the 1829 law gave
incarcerated persons some control over their well-being, as long as they were eligible to
be released. The law specified that “[n]o prisoner shall be discharged while labouring
under a dangerous disease, although entitled to his discharge, unless by his own
desire.”514 In cases when a prisoner fell dangerously ill while actively serving a sentence,
the prisoner would not be transferred to an external hospital, and would be forced to trust
the designs of the prison infirmary.

At Eastern State Penitentiary, the physician had charge of “the mental as well as
the bodily state of every prisoner.” Upon each admission to the Penitentiary, the
physician performed physical and mental evaluations on the new convict, after which the
convict was “stripped of his or her clothes, and clothed in the uniform of the prison, …
being first bathed and cleaned.” He visited each convict at least twice a week and paid
daily visits to prisoners in the infirmary, who had to remain sequestered there “until the

514 Acts of the General Assembly Relating to the Eastern State Penitentiary, and to the
New Prisons of the City & County of Philadelphia (Philadelphia, Pa.: J. W. Allen, 1831),
13-15.
physician shall certify that he may be removed without injury to his health, and he shall then be removed to his cell.” According to the law, “[t]he infirmary shall have a suitable partition between every bed, and no two patients shall occupy the same bed; and the physian [sic] and his attendants shall take every precaution in their power to prevent all intercourse between the convicts while in the infirmary.” 515 In sickness, as in health, the prisoners at Eastern State had to remain as isolated as possible.

In 1832, the year cholera struck Philadelphia, Eastern State Penitentiary escaped unscathed. In fact, only four prisoners died in that institution that year. Franklin Bache, the physician at the penitentiary, reported that none of these deaths were, strictly speaking, attributable to solitary confinement. Prisoner No. 112, who died of “mania,” was “apparently well on admission,” though in actuality “on the verge of an attack of that disease.” Bache concluded that “prisoner No. 49 was labouring under insanity when received into the penitentiary, and that he committed the act of self-destruction under the influence of a paroxysm of that disease”—in other words, solitary confinement did not drive him mad, since he was already “insane” to begin with. Prisoners No. 114 and No. 40 died of hemorrhage and consumption respectively. The former had begun his imprisonment while “apparently in good health,” before dying ten weeks later. The latter died “after an imprisonment of nearly two years.” It was Bache’s opinion that “[n]o peculiar causes can be alleged to have operated on his system in this penitentiary, to produce his disease. Consumption is a very prevalent complaint in prisons, and, indeed, among our population at large; and the prisoners of this penitentiary will necessarily be

515 Ibid., 14-15.
subject to it, especially if, as in the case of the prisoner here referred to, they have spent a considerable portion of their lives in other prisons.” 516

The fact that Prisoner No. 40 had been in and out of prison throughout his life points to a central facet of the carceral system. John Sergeant had observed that, in too many cases, prison could become a kind of second home for a first-time offender, “from which he is only occasionally absent during the rest of his life.” 517 Furthermore, the populations of prisons, hospitals, and almshouses were by no means entirely distinct groups; it was not unheard of for someone to be bounced around from one institution to another, as in the case the Haitian girl Jane Price who, by the age of thirteen, had already spent time in prison and in the almshouse, and Emeline Smith, a twenty-four-year-old woman of color who was sent from prison directly to the almshouse. 518

On December 6, 1832, Governor George Wolf informed the state legislature that “[t]he experiment made in the Eastern penitentiary, has demonstrated the fact, that solitary confinement with labour, does not impair the health of those subjected to that species of discipline.” 519 In other words, the experiment was a success. But the system had its detractors. Despite Wolf’s evidence to the contrary, some found solitary confinement cruel and unhealthful. Among those who argued against the healthfulness of


517 Letter from John Sergeant to Roberts Vaux, September 8, 1827, in Sergeant and Miller, 4.

518 “Almshouse Records 1837.”

the system was physician Benjamin Coates. An ardent supporter of the African colonization movement, Coates doubted the claims of Wolf, arguing that persons of color—especially young men—suffered unduly from solitary confinement, becoming scrofulous and sickly. And not only did persons of color supposedly react more strongly to solitary confinement than whites, they reacted *differently*. According to Coates, “[t]he effect [of solitary confinement] upon the unfortunate coloured prisoners, though scarcely perceptible upon the whites, has been to produce not mania, but weakness of mind; dementia, instead of deranged excitement.”

Already allegedly sluggish by nature, persons of African descent placed in solitary confinement descended ever further into depressive and lethargic madness.

Out of the 337 inmates admitted to Eastern State Penitentiary between 1829 and 1834, only fifteen died. By the end of 1842, the number of the dead had reached 135, of whom ninety-three—more than two-thirds—were persons of color. Persons of color made up approximately one-third of prisoners at Eastern State, and approximately 11% of the population of the city at large. In other words, much like at the Almshouse, persons of color were overrepresented both among the prison population itself and among prison deaths. And no wonder—common wisdom, championed by Coates and his ilk, prevailed that “[a] degree and duration of confinement which can be borne with

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520 Coates 96-97.
522 Coates 89, 92.
comparative safety by the healthy white man, often proves highly detrimental, and even fatal, to the black or mulatto, of the same age and state of health.”

In 1831, twenty-eight out of thirty-seven deaths in Walnut Street Prison were persons of color. Someone like Benjamin Coates might have ascribed the overwhelming Blackness of the prison’s mortality to “the production of scrofula, and pulmonary consumption” in persons whose bodies were “calculated for the torrid zone” and thus more greatly affected by cold. For Coates, this was only another reason in favor of the colonization movement. If prisoners of African descent could not tolerate North America’s climate, it was the duty of prison reformers to support these prisoners’ “return” to their “native” Africa. To force Black prisoners to serve their sentences during a Philadelphia winter was unnaturally cruel. What was more, it was eminently disadvantageous to the penitentiary’s goal of curbing recidivism and vice. To the extent that physical and moral healthfulness went hand in hand, as penal reformers certainly believed they did, placing convicts in environments conducive to their health made perfect sense as a strategy to encourage their moral reformation.

Of course, the additional ingredient of fear could help inspire moral improvement as well. A representative for the state legislature reported that, at Eastern State, “[t]he convicts are much alarmed, when so sick as to be confined to their beds. The idea of dying in prison, without the consolatory attention of friends and relations, constantly

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525 Coates 96.
haunt their imagination, and perhaps render their system less able to withstand the ravages of disease.” He suggested that “[a]musement and frequent use of their yard during the day, would perhaps facilitate their recovery,” though by and large “[t]he general health of the convicts is remarkable.” Of the twenty prisoners freed during 1832, Bache described eleven as “good” both upon admittance and discharge. He described two as “better than on admission,” one of whom was “good” upon admission and the other “not robust.” In addition, one “imperfect” admission was discharged as “better,” and one “not good” admission as “improved.” One “robust” admission was discharged as “excellent.” Two were admitted and discharged as “insane,” and one was admitted and discharged as “idiotic.” Finally, one prisoner was admitted as “subject to asthmatic symptoms,” and was “same as when received” upon discharge.

Dr. Isaac Parrish proposed the organization of a committee to inquire into the differential treatment of white and Black convicts in the city’s carceral institutions, which led to the establishment, in 1849, of the Committee on the Comparative Health, Mortality, Length of Sentences, &c., of White and Colored Convicts. Beginning with the observation that the mortality rate among prisoners of color at Eastern State was quadruple that of white prisoners, three questions guided the Committee’s inquiries:

Firstly, Is there any difference in the mortality of these classes in the community at large?
Secondly, Do causes which operate with comparative inconspicuousness upon the white man, produce dangerous and even fatal effects on the colored man?

Lastly, is there any distinction made in the treatment of the two classes in prison, which can account for this high mortality of the colored?\textsuperscript{528}

The Committee calculated that “[t]he whole number of white prisoners admitted during this period [1829-1848] is 1,631; of colored prisoners, 790. Of the whites, 73 have died; of the colored, 141 have died; that is, there has been a mortality amongst the whites of about 4\ 50/100 per cent., and amongst the colored, of nearly 18 per cent.” While acknowledging the existence of a racial disparity in mortality rates for the general population of Philadelphia—3.75\% for persons of color versus 2.37\% for whites—the Committee noted that this difference was insufficient to fully account for the enormous racial disparity in prison mortality rates. To the Committee, it was obvious: “no candid mind can doubt that a wide difference exists between the deaths of white and colored inmates of the Eastern State Penitentiary and of the County Prison; nor that the average length of sentences is considerably greater in the latter than in the former class.” Granted, the overall mortality rate at the County Prison was not quite as extreme as that at Eastern State, but the Black mortality rate still soared above the white mortality rate—8.5\% versus 2.5\%.\textsuperscript{529}

Ascertaining the reasons behind this differential mortality rate required careful attention to detail on the part of the Committee. Intimate observations of Black and white bodies under conditions of incarceration was an essential part of this process of understanding. The Committee attributed part of the racial disparity in mortality to the

\textsuperscript{528} Report of the Committee on the Comparative Health, Mortality, Length of Sentences, &c., of White and Colored Convicts 3-4.

\textsuperscript{529} Ibid., 1, 3, 4-5.
“essential difference between the white and colored races in their susceptibility to solitary
confinement” as a result of the “scrofulous tendencies” of the latter group. The fact that
“colored prisoners are more frequently visited with long terms of confinement than
whites” merely compounded this fact. Dr. Coates speculated that since, “from the dislike
of cold, the colored convicts deprive themselves of a portion of their ventilation,” their
mortality rate was bound to exceed that of whites, but the Committee found his
explanation wanting. For one thing, the architecture of Eastern State was “such as almost
entirely to exclude the direct rays of the sun, both from the cells and yards, and thus to
render them damp and cheerless,” a situation “highly prejudicial to health.” Furthermore,
at both Eastern State and the County Prison, prisoners performed forced labor as
shoemakers, weavers, bobbin-winders, and the like, all of which, due to their sedentary
and repetitive natures, were “trades … especially inimical to health.” As a result of these
combined biological and situational factors, prisoners of color were especially susceptible
to chronic diseases like scrofula and tuberculosis, which exacerbated acute illnesses
should they arise.530

To tackle this issue, the Committee argued for redesigning the cells and
workshops occupied by prisoners to allow for “a sufficient supply of pure air, and of sun-
light … to insure the healthful performance of [the prisoner’s] functions.” Scrofulous
prisoners, particularly prisoners of color “of 20 years of age and under,” should be
afforded the opportunity to work “in the open air,” since prisoners of this class “die in
such appalling numbers at the sedentary occupations at which they are now placed.” The

530 Ibid., 5-7, 10-11, 16
death of any prisoner, the Committee argued, was a gross failure of the system’s
designs—namely, “the restoration of the offender to the bosom of society.” They explained: “when the state assumes the control of his movements, and appropriates the
proceeds of his labor, it is equally bound to protect him, and to neglect no reasonable
measure to preserve his mental and physical health.”  

Prisons and penitentiaries, because they served carceral functions, were also obliged by the logic of prison reform to
serve personal and public health functions. The carceral environment was supposed to
maintain the prisoner’s healthfulness, but should a prisoner fall ill—as morally vicious
persons were wont to do—the prison or penitentiary was theoretically obligated to restore
that prisoner’s health, ideally to a state better than it was when initially incarcerated.

But if the prison failed to do so—if, in other words, the inmate happened to die—
the inmate’s body could be nonconsensually enlisted to produce new knowledge as part
of the anatomical-clinical synthesis. Incarceration in nineteenth-century penitentiaries,
like other forms of institutionalization, operated on the prisoner’s whole person, mind and
body, even as it professed to protect it. Any historical consideration of prisons must deal
with Foucauldian theories of punishment. According to Foucault, nineteenth-century
penal reformers faced disapproval for their insufficiently punitive approach to
incarceration. Critics of the time pointed to the favorable conditions of penitentiaries
relative to impoverished and working-class households. Foucault mused that “[i]t is
difficult to dissociate punishment from additional physical pain. What would a non-
corporal punishment be?” To answer this question required “a change of objective” when

531 Ibid., 22-23.
it came to incarceration. The goal of prisons shifted from deterring crime to reforming criminals, not through physical punishments but through a kind of forced introspection that, ideally, would lead to individual moral improvement. But Foucault’s understanding of penitentiary discipline too quickly dismissed the embodied experience of incarceration. Even if prisoners’ punishments were levied on their minds and souls, prisoners themselves could not help but experience imprisonment through their physical bodies; the inextricable intertwining of body and mind ensured that this would be the case.

The existence of prison physicians is testimony to this fact. The distinction between public health institutions and carceral institutions in the early Republic was never absolute. Each institution supported the other in its projects: the prison and penitentiary, by encouraging more virtuous habits; the hospital and almshouse, by containing otherwise innocent persons of the vicious, poor, and degraded classes; and the lazaretto, by confining persons on board of ships suspected of carrying infected cargo. Through solitary confinement, penitentiaries sought to eliminate intimacy between prisoners, but the humanitarian sensibilities of prison reformers made it impossible to eliminate intimacy between prisoner and prison officials, especially the prison physician. By the rationale of the penitentiary system, to prevent a prisoner from seeing a physician on a regular, intimate basis was not only cruel, it was inimical to the system’s goals, for moral reformation and physical health went hand in hand, even if they were distinct categories. The physician was among the prisoner’s most constant presences during

solitary confinement, administering physical and mental examinations upon entry and exit, and calling regularly at each prisoner’s cell. Without the physician’s intimate knowledge of each prisoner’s physical and mental health, the logic of the penitentiary system would have collapsed under its own oppressive weight: there could be no just confinement without a reciprocal stewardship of each prisoner’s moral and physical well-being.

Like the Almshouse, Philadelphia’s prisons functioned as both carceral and public health institutions. Despite Foucault’s claims about the rise of a new penitential order, nineteenth-century North American prisons continued to punish the bodies of inmates. In order to support their claim to complying with humane ideals, prison reformers and the institutions they organized needed to display an interest in maintaining and restoring prisoners’ bodily as well as their moral and mental health. Thus, during the late eighteenth and early nineteenth centuries, institutions like prisons and almshouses were the sites of coercive forms of care that targeted the whole patient. Generally, scholars have used coercive care to refer to morally ambiguous instances in which a medical provider, such as a physician, nurse, or caregiver, may be construed to have the power of veto over how a patient wishes to be treated (or not treated). For example, in reference to seropositive persons, Torbjörn Tännsjö asked (and answered in the negative), “[m]ay society detain people who put others at risk?” Nineteenth-century penal reformers, in reference to persons with “vicious” habits, answered this question in the affirmative. According to the plans adopted by such reformers, this detention required separation of

533 Tännsjö 83.
inmates not just from society, but from each other. However, institutional physicians and other supervisors carefully monitored inmates kept in solitary confinement, substituting inmate-inmate intimacy with inmate-supervisor intimacy, thereby intensifying the coercive aspects of institutional intimacy that inmates experienced.
CONCLUSION

“This Formidable Epidemic”: Cholera’s Return and Its Resonance, 1846-1854

In 1855, one University of Pennsylvania medical student wrote that “[t]he history of epidemic cholera presents some of the most direful and appalling scenes ever recorded in the annals of man.” The disease had “disseminated misery and terror over every quarter of the globe, and deprived earth [sic] of millions of her happiest and best citizens.”534 The same year, another medical student wrote that “[f]rom time immemorial this fell disease has occasionally ravaged India being an endemic of that country and has but seldom travelled beyond the confines of the hot region in which it was generated.”

But the spring of 1846 proved to be one of those times, as cholera appeared in Karachi, made its way throughout the Gangetic Plain, into continental Europe, and then to Sunderland and London by 1848, “a course of travel parallel to that of” its previous spread in the 1820s and 1830s. In preparation for the arrival of “this formidable Epidemic,” Philadelphia’s Board of Health adopted “a system of sanitary appliances” in November of 1848, ordering “the careful removal of all those agents or accessory causes, which experience has proved, are abundantly fruitful, in favouring the promotion and


spread of zymotic diseases.” In referring to cholera as a zymotic disease, the Board of Health situated it in between the categories of infectious and contagious. If cholera was in fact zymotic, it was essentially akin to an intestinal fungal infection. In other words, it was fundamentally caused by an accrual of noxious organic matter that was suffered to putrefy, but able to spread under certain circumstances through processes similar to fermentation.

While cholera’s path in the 1840s initially mirrored that of the 1830s, Philadelphia’s Sanitary Committee (comprising seven members of the Board of Health, two of whom were physicians) and the city’s Board of Health as a whole were befuddled when cholera appeared in Staten Island and New Orleans in November of 1848, within days of each other. How did the disease pop up in two port cities on opposite ends of the coast at roughly the same time? They decided that in each location the disease must have originated when ships “crowded with emigrants, uncleanly and badly ventilated … passed through a stratum of atmosphere, loaded with some peculiar influence, which, under favorable circumstances, produced in both cases the cholera poison.” This conclusion explicitly connected cholera not just with filth, but also with immigration. While immigrants would not necessarily carry diseases with them, the Sanitary Committee agreed with the Board of Health generally that, when coupled with poisonous atmospheric conditions, large groups of immigrants being kept together in close quarters could have disastrous public health consequences. Still, even with theories like these,

537 Ibid., 7.
cholera was puzzling. Indeed, University of Pennsylvania medical student James McDowell asserted in his 1855 dissertation that there were “but few [diseases] which baffle the skill of the physician more than this.” Furthermore, there was no “satisfactory” treatment of the disease, especially after its first and second stages. 538

Although Philadelphia “may enjoy, and well deserves the credit of being the cleanest [city] in the Union,” the Sanitary Committee was not exactly proud of the city’s overall cleanliness. Philadelphia appeared clean to the “careless observer,” but hidden “within and adjoining the premises, not only of the poor, but of those whose condition in society would place them far above suspicion,” were a “serious number of concealed nuisances.” Between October of 1848 and October of 1849, the Board of Health “removed” over 6500 such “remediable evils” within the city of Philadelphia and its environs. Of the “nuisances removed,” all, “with the exception of 146, were on private property, and hundreds of them were entirely concealed from the public eye.” 539 To ensure the health of the public required the cooperation of private individuals.

The city’s public health officials continued to associate filth—and thus cholera—with Blackness. The Sanitary Committee condemned “the rag and bone establishments in the immediate vicinity of the wretched neighborhoods of Baker, Bedford, and Spafford streets, Moyamensing, where moral debasement and physical disorder, set at defiance all law, and shame civilization; the very hot-beds of everything offensive and disgusting.” Moyamensing was a predominantly African-American community; the Sanitary

539 Statistics of Cholera 10-11, 15.
Committee described its population as “the numerous poor and degraded blacks who infest that vicinity.” African Americans—at least those in Moyamensing—were like a disease-bearing, pestilential swarm in the eyes of the Sanitary Committee, like the insects that polygenist Josiah C. Nott had recently theorized to be the source of yellow fever.

In April 1849, the Lazaretto Committee enacted a plan to detain incoming vessels from Europe and other choleraic ports, along with those carrying “a case of Small-pox or infectious or contagious disease on board.” Shortly thereafter, rumor began to spread that cholera had reached Philadelphia, which the Board of Health categorically denied. To allay public fears, the Board of Health imposed a plan to cleanse the streets’ gutters on a daily basis, and recommended that families clean and whitewash their homes. But on May 30, three potential cases of cholera came to the Board’s attention. A canal boat containing three passengers “had arrived the night before from Bridesburg.” Two of the passengers, both men and “both of whom were intemperate,” had died of cholera that day. The third, a woman, “who was not sick, being refused admittance into any of the houses at Richmond [the Philadelphia neighborhood where the boat had arrived], owing to the panic, was taken care of by the Board of Health, conveyed to the City Hospital, and in a few days left the city for her residence, at Trenton, N. J.” The boat itself, which “was extremely filthy, confined, and damp … was hauled to a sand-bar opposite the city, and sunk.” At Fourth and Shippen Streets in Southwark, an Irish immigrant, having recently

540 Ibid., 13.
541 See Nott, 563-601.
arrived from New York, also perished from cholera on the same day.\textsuperscript{543} There was no denying that cholera had returned.

A few more cases steadily appeared: on May 31, a ferryman living on Barclay Street; on June 2, a case in the eastern portion of the city and another near the Schuylkill. In June, “the cases gradually increased … while rumour was actively engaged in multiplying cases.” The Board of Health tasked itself “to give the truth—to conceal nothing—as the best and most certain course to tranquilize the public mind.” This entailed the creation of a daily cholera bulletin, in the interest of ensuring that only accurate information was allowed to spread through the community.\textsuperscript{544} This plan mirrored that adopted during the 1832 epidemic. Again the bulletins would have allowed Philadelphians to know where each case was located and whether it directly threatened them. Although some Philadelphians fled the city for fear of contagion, others—including William Horner’s younger brother Alfred and his family—chose to remain in the city, closer to better healthcare resources. Historian observed that, “[a]t least for this one middle-class Philadelphian at mid-century, so well versed in the city’s medical world, superior medical infrastructure won over flight from contagion.”\textsuperscript{545}

In addition to the daily cholera bulletins, a system of local dispensaries provided poor Philadelphians with cholera remedies, at no charge. The Sanitary Committee wholeheartedly approved of “[t]his humane and wise regulation,” as the poor were “thus

\textsuperscript{543} Ibid., 17-20.
\textsuperscript{544} Ibid., 20-21.
... enabled to receive attention at their own homes,” and from a “respectable physician,” no less. According to the Sanitary Committee, “[h]undreds of our citizens, poor, though worthy, embraced this privilege, and we have reason to believe that valuable lives were saved by this judicious and wholesome sanitary arrangement.”

The worthy poor made use of the dispensaries; presumably so did many of the “unworthy” poor, although the Sanitary Committee elided this fact. The “worthy” poor comprised those who had fallen on hard times due to factors outside of their control—the death of a husband, a prolonged illness, and the like.

The Board of Health acknowledged the work of physicians during the cholera epidemic: “By night or by day they were found in the pent-up chambers of the sick and the afflicted, breathing in a loathsome and pestiferous atmosphere, cheerfully and assiduously administering to their relief.” The meritorious physicians were “exposed to contagion, if any existed, and at the hazard of health and life, with no other reward than the pleasure of doing good to suffering humanity in a god-like profession.” Physicians risked their lives, the Board of Health praised, to mitigate the suffering of others during

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546 *Statistics of Cholera* 21, 28-29.

547 For more on the concept of the “worthy” poor, see Alexander 127. Historian Pamela Nadell has noted that “[t]his idea of parsing the poor into the deserving because of circumstances and the undeserving because of laziness or nature was the norm then and continues to this day.” See Pamela S. Nadell, *America’s Jewish Women: A History from Colonial Times to Today* (New York, N.Y.: W. W. Norton & Company, 2019), 32. Ironically, historian Priscilla Ferguson Clement noted that “[t]he worthy poor rarely asked for charity,” making the issue of reaching them all the more important. See Priscilla Ferguson Clement, *Welfare and the Poor in the Nineteenth-Century City: Philadelphia, 1800-1854* (Cranbury, N.J.: Associated University Presses, 1985), 51.

548 *Statistics of Cholera* 29. Only four of the eighteen members of the Board of Health’s District Committees were medical doctors: Wilson Jewell, J. D. Logan, John A. Elkinton, and Henry Pleasants. See Ibid., 26.
this dreadful epidemic. Scenes of degradation affronted physicians wherever they went. Historian Charles Rosenberg wrote that “[i]n Philadelphia, ‘a free couple of color,’ dying of cholera, were removed from the four and a half by seven foot room in which they lived.”\textsuperscript{549} Such squalid conditions all too often went hand in hand with disease during epidemics like cholera. The smells to which physicians were exposed would have been noxious, and thus jeopardizing to their health in the understanding of the time, even if cholera itself were not contagious—a point of contention which the Board of Health, comprising as it did both physicians and laypersons, continued to debate.

Again the Board established district cholera hospitals, located in schoolhouses, “agreeably to the plan pursued in 1832.” Such a plan met with intense disapproval from the Controllers of the Public Schools. Nevertheless, ten cholera hospitals were established by the end of July: one on Cherry Street, one in Southwark, one in Moyamensing, one in Northern Liberties, one at Bush Hill, one in Richmond, one in Kensington, one on Pine Street, one on South Street, and one in West Philadelphia. Together, the hospitals served 463 patients, of whom 344 suffered from epidemic cholera. The remainder suffered from diseases that were initially mistaken for cholera, but rediagnosed by the cholera hospital physicians as cholera morbus, dysentery, or other diarrheal diseases. The vast majority—over eighty percent—of the cholera hospital’s cholera patients were white, but this still indicated that Black Philadelphians were disproportionately hospitalized. Most of the patients were “of intemperate habits … and of the intemperate, almost all the cases proved fatal.” Approximately one in three cholera

\textsuperscript{549} Rosenberg, \textit{The Cholera Years}, 145.
patients at the cholera hospitals died, slightly better odds than those experienced by patients outside the hospitals.550

From May 30 to August 18, over two thousand cases of cholera came to the attention of the Board of Health. Three hundred sixty-two deaths occurred in hospitals, the Almshouse, and the county prison. The epidemic reached its peak around mid-July. By August 8, the epidemic appeared to be receding. With this observation in mind the Board of Health closed most of the cholera hospitals, leaving only the Cherry Street, Moyamensing, and Richmond locations in operation.551 The Sanitary Committee acknowledged that innumerable cases of cholera went unreported, but decided not to allow for such discrepancies in presenting the following statistics of the epidemic552:

<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>118491</td>
<td>388</td>
<td>127</td>
</tr>
<tr>
<td>Southwark</td>
<td>36458</td>
<td>276</td>
<td>50</td>
</tr>
<tr>
<td>Kensington</td>
<td>47697</td>
<td>218</td>
<td>54</td>
</tr>
<tr>
<td>Spring Garden</td>
<td>54532</td>
<td>108</td>
<td>33</td>
</tr>
<tr>
<td>Moyamensing</td>
<td>25705</td>
<td>191</td>
<td>52</td>
</tr>
<tr>
<td>Northern Liberties</td>
<td>49321</td>
<td>147</td>
<td>38</td>
</tr>
<tr>
<td>Penn District</td>
<td>7325</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Richmond</td>
<td>5529</td>
<td>39</td>
<td>13</td>
</tr>
<tr>
<td>West Philadelphia</td>
<td>3413</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Passyunk</td>
<td>1529</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5: Number of cholera cases and deaths by district, Philadelphia and environs, May 30 to August 18, 1849. Adapted from *Statistics of Cholera*, 43.

550 *Statistics of Cholera* 32-33, 39-41. There were 1,797 reported cases of cholera outside the hospitals, of which 636 (or roughly 35%) were fatal.

551 Ibid., 36, 41-42.

552 Ibid., 43.
Men between the ages of 30 and 40 were the most likely demographic to perish from the disease. Black Philadelphians were more likely to die than white Philadelphians. Considered generally, however, the 1849 epidemic affected a much lower proportion of the city’s population than the 1832 epidemic had. While about 1 in 69 Philadelphians had fallen ill during the 1832 epidemic, only 1 in 164 had labored under the disease in 1849. That said, the ratio of cholera deaths to cases was slightly worse in the latter epidemic, but as a whole Philadelphia fared better in 1849 than it had in 1832.

On August 18, the Board decided to no longer issue daily cholera bulletins, and “[t]his announcement gave general satisfaction, and had its desired effect, both at home and abroad, by allaying all excitement, and restoring to our commerce its accustomed amount of trade.” However, the Board wanted to ensure that its “wholesome sanitary regulations for cleansing the streets” would not go unobserved after the epidemic. The Sanitary Committee rejoiced “that the danger is past, and we breathe once more an uncontaminated air.” Smell was central to American medicine of the time. It was nearly universally agreed upon “by all sanitary observers that the fœtid emanations from foul sewers and gutters are highly dangerous to health,” and the exhalations engendered by them “both pestiferous and intolerable.” The Board considered the Almshouse burial ground “to be a prolific agent in the concentration of the Cholera poison in a

553 Ibid., 46.
554 Ibid., 50.
555 Ibid., 37, 55.
556 See Kiechle 22.
557 Statistics of Cholera 16.
certain locality in West Philadelphia, where the disease had been rife.”\textsuperscript{558} West Philadelphia was a relatively salubrious locale, hence the impetus to locate institutions like the Almshouse there. Because of the miasmatist inclinations of the time, no other source of contamination could have produced the disease, the Sanitary Committee found, than the putrid exhalations of the burial ground.

By the 1850s, if not earlier, epidemic cholera had come to be called, “by common consent,” just cholera. In his 1851 medical school dissertation on cholera, Miles Folkes denied the possibility that cholera was merely a more violent cholera morbus, on the grounds that the evacuations were different in the two diseases. The diseases looked different in other ways, too. Although a cholera patient’s mental faculties remained sharp, Folkes noted, “his [\textit{sic}] moral feeling is wholly obtunded. He is apathetic about his condition, and exhibits alike indifference to his future prospects, and the anxiety of his friends.” The patient became, Folkes said, quoting Lord Byron, “a ‘mass of animated dust.’” Furthermore, upon death during the stage of collapse in cholera, “[t]he mucous membrane of the stomach and bowells [\textit{sic}], is injected and its epithelial layer thrown off leaving a blistered surface. This may be considered,” Folkes stated, “as the only appreciable lesion of cholera.”\textsuperscript{559} It was William Horner who first discovered this morbid change in intestinal anatomy.\textsuperscript{560}

\textsuperscript{558} Ibid., 37-38.

\textsuperscript{559} Miles W. Folkes, “An Essay on Epidemic Cholera” (1851), 378.748 POM 1851.1.11, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 2, 3, 13, 14, 20.

\textsuperscript{560} Isaac Norris, Jr., “An Essay on Epidemic Cholera” (1855), 378.748 POM 1855.3.5 Pt. 1, Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania, Philadelphia, Pa., 26.
distinguishing between typhus and typhoid, cholera patients who died during the state of collapse presented “morbidly enlarged” glands of Peyer. Medical student Clarence Lewis later elaborated: “Post-Mortem appearances vary according to the stage in which death has taken place. The abdominal viscera are for the most part gorged & congested with blood of a dark hue.”

Folkes supported the animalcular theory of cholera’s origin. According to Folkes, the disease spread “by the germs of these animalcules, or the animals themselves, being conveyed in articles of clothing, in ‘holds of vessels,’ or some other manner, into regions of country where the conditions necessary for their rapid propagation, and development are favorable.” But the nature of these animalcules was unclear, and adding to the confusion was the fact that “[f]requently the alarm is so great as to produce an imaginary cholera, or (more scientifically) Choleraphobia, or Choleramania.” Fear of contagion only served to heighten Choleraphobia. Isaac Norris, Jr., a medical student, wrote unequivocally in his 1855 dissertation that “[c]holera is not contagious and no fact so conclusively confirms the truth of the above statement than when persons having this disease have been placed in hospitals free from it, in many cases between patients otherwise affected, without communicating the disease.” Norris further urged that “[i]t should be the duty of every physician strenuously to inculcate the above truth to the public ear, for if the opposite be believed generally, in case of an epidemic, such is the inherent selfishness of man, the sick would be left to take care of

561 Folkes 21.
562 Lewis np.
563 Folkes 6, 23-25.
themselves, while those whose duty it was to watch over and protect them, would
endeavour to place as great distance between them as possible.”

After 1849, cholera returned once more to Philadelphia and its environs in 1854. Even locations known for their healthful atmospheres, like Chester County, did not escape the ravages of cholera in 1854. Unsurprisingly, the disease raged with particular violence in that county’s almshouse, where about sixty of its 150 to 200 inmates died within three weeks in August. According to medical student J. Robert Hayes, Patient Zero was a man who had spent a drunken night in the rain before being brought to the Almshouse, where he died. The patients presented the usual symptoms of cholera, including the rice water evacuations. Only one doctor attended the almshouse patients, because the attending physicians of the institution did not fulfill their duties due to a “misunderstanding.” Hayes believed the disease presented signs of contagion, but was not truly contagious because it did not spread throughout the county, but rather was confined to the Almshouse “although a number of the inmates escaped and wandered several miles.” Hayes observed that “[c]holera is undoubtedly a peculiar epidemic in consequence of its grasshopper like movements.”

Another medical student, William Ramsey, made a similar observation about cholera: “Whilst spreading over the world its progress has been very irregular both as regards the directions which it has taken, and the rapidity with which it has travelled.” Ramsey described experiments with the rice water discharge of cholera patients. He

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wrote that, “[u]pon being allowed to stand, this deposits a white flocculent substance, the liquid portion being clear and nearly colorless. The precipitate has been ascertained to consist of epithelial cells, and the liquid to be water holding in solution some salts, of which Chloride of Sodium is the most abundant.”

The careful experiments with patients’ rice water evacuations described by Ramsey calls to mind Isaac Cathrall’s earlier experiments with the black vomit of yellow fever patients. Through meticulous histological observations, physicians ascertained the makeup of rice water diarrhea, concluding that it was composed of, as Ramsey described, mucous membrane cells in a sodium chloride solution.

With regard to the contagion debate, Ramsey had much to say. He was unequivocally of the opinion that cholera was epidemic, which to many physicians would have implied noncontagion, “but may it not,” Ramsey asked, “like Scarlatina or Typhus fever be both epidemic and contagious?” His own experiences in Bridgeport had convinced him, contrary to his education, that the disease could be contagious under certain circumstances. Its precise mode of propagation, however, remained a mystery to him: “It has been attributed by some to animalculæ,” he wrote, “but this supposition has never been sustained by proof. Although the air of districts where the disease was prevalent has often been examined, no animalculæ have ever been discovered.” Here, Ramsey’s miasmatic predisposition shone through: if microorganisms did cause cholera,

he reasoned, they could only be transmitted via air. No other mode of propagation made sense to him.  

As to the nature of cholera, by the 1850s it was not even universally agreed upon by physicians that cholera was primarily a gastrointestinal disease. University of Pennsylvania medical student Marcellus McDavitt described the debate over the nature of cholera as essentially a battle between those who believed that cholera was inflammatory, and those who believed that it was “of a depressing character.” The former view held that the premonitory diarrhea of cholera indicated the disease’s inflammatory nature, but McDavitt himself asked “may not this be the result of irritation not amounting to inflammation?” Instead, he proposed that this diarrhea resulted “from mere relaxation of the vessels,” indicating that cholera was not at all inflammatory. McDavitt emphasized that “signs of inflammation [in the stomach and intestines] are so rarely presented that when found we are warrantable in attributing them to some accidental circumstance.” Rather, McDavitt said, upon dissection the stomach and intestines were “filled with rice water or distended with gas, but usually free from any signs of inflammation.”

Some physicians believed its primary seat was rather the nervous system or the red blood corpuscles. Ramsey himself noted that “[a]n irritation of the alimentary canal could not alone produce the secretion of the immense quantity of fluid which takes place. To account for this we must suppose that there is at the same time a relaxation of the

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567 Ibid., 9, 11-12. For more on the history of theories about the relationship between cholera and miasma, see Kiechle 39-42.

568 Ramsey 13.

569 McDavitt 45, 47, 49, 55.
tissues allowing the escape of the liquid portion of the blood.” In Ramsey’s estimation, then, cholera affected patients’ alimentary canals—from mouth to anus—and their blood plasma. McDavitt firmly believed that the blood was the seat of cholera: “The vessels of the stomach and intestines become congested,” he explained, “their exhalant orifices become relaxed, and permits [sic] the fluid portions of the blood to escape, while the more solid constituents are still retained in the circulation thus giving rise to a copious discharge both by the anus and mouth,” thereby clarifying the reasons behind the presence of serosanguinous fluid in cholera evacuations.

Ramsey reported that, although physicians employed a dizzying assortment of remedies in treating cholera—from bleeding to emetics to intravenous saline injections—“[t]he results under all treatment [sic] are about the same, nearly one half of the cases die.” As a result, “[h]aving no settled plan of treatment, we must meet the different indications as they arise.” First, the goal was “to allay the irritation of the stomach and bowels and to restore the biliary secretion”—this meant the administration of mercurial with opium, as well as vegetable astringents and lead acetate. During the disease’s second stage, various stimulants—aromatic spirits of ammonia, spirits of camphor, and the like—proved useful, as did anodyne injections of laudanum into the rectum and sinapisms to the epigastrium. Bathing the feet in hot water or a mustard and cayenne solution, and the steady application of dry friction, were also beneficial during this stage. At the stage of collapse, “the same remedies should be continued,” with astringents applied to the skin “to close the external exhalant vessels” as well as “rubbing with ice

570 Ramsey 13-14.
571 McDavitt 51, 53.
water.” Ramsey cautioned that “[i]f the patient passes through the collapse and begins to react, stimulants should be gradually withdrawn.”

According to McDavitt, in cases of cholera “[a]nodyne and astringent enemata do essential service … They allay irritation and assist in checking the discharges.” McDavitt prescribed “[l]audanum and a solution of starch together with some astringent” as a particularly useful preparation. McDavitt cautioned that “[v]enesction is seldom requisite here unless it be to ward off inflammation threatening some vital organ,” indicating his belief that, while cholera was not inherently inflammatory, it could be accompanied by inflammation. Cold baths, according to McDavitt, were “rather a dangerous expedient” than an effective treatment, though warm baths were “very efficient in aiding other remedies in determining action to the surface and inviting blood from the interior.”

What is indicated by these treatments, as well as McDavitt’s and Ramsey’s tone in describing them, is both a continued sense of physicians’ powerlessness at the hands of the scourge of cholera, and—no less significantly—the level of intimacy required to treat the disease as effectively as possible. Over twenty years after cholera’s first appearance in the United States, many American physicians still wrung their hands in anguish over how to treat the illness; no matter what course of action they took, they felt reasonably certain that the mortality rate would hover around fifty percent. But physicians also busied their hands and the hands of nurses and attendants when it came time to care for cholera patients. Administering enemas, rubbing limbs, and bathing feet were all, as

572 Ramsey 17-20.
573 McDavitt 73-77.
described in previous chapters, time-consuming tasks, often performed continuously over
prolonged periods of time, that hinged upon physical and sensory proximity between
patient and physician.574

In his 1855 medical school dissertation, Isaac Norris, Jr., acknowledged the
existence of “[t]hree distinct varieties” of cholera—cholera infantum, cholera morbus,
and epidemic cholera—but considered them “essentially different, though many
confound the last two together, declaring they are one and the same disease, differing
from each other only in intensity.” Norris sneered at this unsophisticated understanding
of cholera, scoffing that “[a]ny one who has studied by the bedside the two must be
struck with their difference”—a nod to Louis’s brand of clinical epidemiology, which
rested on the physician’s attention to pre- and postmortem details.575 Indeed, familiarity
with cholera rested upon postmortem as well as premortem examinations. When patients
died during a state of collapse, William Ramsey reported, the abdominal viscera
presented “of a violet hue from venous congestion, and on their mucous surface is a white
deposit similar to the flocculent substance in the discharges, and like that consisting of
cast-off epithelial cells.” The same matter presented in patients’ bronchial tubes and
urethrae. Within the bowels, physicians often found a brownish liquid, similar in every
way to the rice water discharge except in color. However, patients who died during the
period of reaction, or after, exhibited inflammation “in different organs; often ulcerations

574 Ramsey 17-20.
575 Norris 1, 2.
of the bowels, which now contain bilious matter instead of the rice water fluid,” and the bowels themselves were of “a reddish hue.”

Norris expressed in his dissertation the necessity of speedy action in treating cholera, noting with a poetic hurriedness that “if the case be advanced into collapse, when the circulation has ceased to a great extent, the breath cold and everything denoting a speedy death, all the medicines in the world cannot be made to act, for it is then too late for them [to] be absorbed and their [sic] can be but one result, except in a few cases, and that is death.” Among the useful remedies Norris listed dry and moist heat, noting that “the former is conveniently furnished by heated bricks wrapped in flannel applied to the palms of the hands and the soles of the feet,” and describing a device, the implementation of which apparently originated in New York, for the delivery of the latter. Physicians could harness the curative powers of moist heat “by the vapour of water generated from a small cup containing water and heated by an alcohol lamp in an apparatus shaped like a funnel, with the tubular portion curved to go under, more conveniently, the bed clothes and made best out of tinned iron.”

Cholera remained a problem in the United States until 1854, after which it suddenly vanished for over a decade. But its effects were much more lasting. Literary scholar Sari Altschuler has written that “cholera left its mark on a generation,” impacting literary movements, political inclinations, understandings of race, and ideas

576 Ramsey 7-8.
577 Norris 20, 23.
578 Rosenberg, The Cholera Years, 172.
579 Whooley 78.
about geography. Altschuler argued that, “[s]ince cholera wrought terrifying devastation and epidemic crises in each decade of the antebellum era all over the country and beyond, we might consider expanding our understanding from what Rosenberg has called the ‘cholera years’ to something more like an Age of Cholera.” The United States was not isolated from the rest of the world, and was well aware of cholera epidemics outside of its borders as early as the 1810s, and cholera’s cultural influence in the United States did not recede in the years in between epidemics on American soil.⁵⁸⁰

Cholera’s horrifying symptoms strengthened its cultural resonance. But the medical and institutional resonances of its morbid sensations converged with the impacts of other epidemics, especially yellow fever and typhus. As a disease, cholera was unique, and uniquely terrifying; this was something that many physicians recognized, even as they also pointed out cholera’s similarities to other diarrheal ailments. But to fully appreciate the legacy of cholera requires examining it in the context of its relationship with yellow fever and typhus epidemics, alongside its institutional ramifications. In other words, the cholera generation identified by Altschuler was also a typhus generation. Gerhard and Pennock’s discovery of the difference in morbid changes between typhoid and typhus had profound implications for theories of disease etiology. The cholera generation in Philadelphia also differed from their parents and grandparents in that they did not have to contend with yellow fever epidemics. And the cholera generation witnessed, participated in, and experienced revolutionary shifts in institutional

⁵⁸⁰ Altschuler, *The Medical Imagination*, 109, 120.
organization, shifts that would continue to influence institutions like lazarettos, hospitals, almshouses, and prisons for decades.
To some observers, the late twentieth and early twenty-first centuries seemed to be an era of chronic disease epidemics, at least from the perspective of the Global North. As early as 1987, sociologist Bryan Turner argued that “[t]he age of heroic medicine has been replaced by the mundane medical management of chronic as opposed to acute illness.” As a result, he wrote, “[t]he problem of long-term illness and its management will be addressed more effectively by sociological perspectives than by purely biomedical perspectives.” Epidemiologists debated the appropriateness of the term “epidemic” as applied to chronic conditions, but that did not change the fact that issues of chronicity defined much of the public health landscape.

But in December 2019, an outbreak of pneumonia in Wuhan caught the attention of local health officials and epidemiologists. Using human airway epithelial cells, a team of Chinese researchers identified the source of the outbreak as a novel coronavirus, which they named 2019-nCoV. As the virus spread—affecting more than two dozen countries by mid-February 2020—the World Health Organization dubbed the disease produced by the new virus COVID-19. In late February 2020, Welsh epidemiologist John Watkins editorialized that “[t]he clinical features of covid-19 [sic] are well documented, with most people displaying mild symptoms or none at all and deaths occurring mainly in elderly and chronically ill patients. This is not the public perception as played out in the media and reinforced by gunpoint quarantine.” Watkins’s glib dismissal of the threats that the disease posed to the elderly and chronically ill was probably meant to reduce panic, but it also speaks to the marginalization of chronically ill persons, especially older adults, and especially during moments of crisis.

typically associated with the Global North, and chronic illnesses can be particularly detrimental to public health in nations like Ghana where, as scholar of chronicity Ama de-Graft Aikins has argued, the “health system is not only structured for treating communicable diseases, but it also operates with inadequate financial and human resources.” See Ama de-Graft Aikins, “Ghana’s Neglected Chronic Disease Epidemic: A Developmental Challenge,” *Ghana Medical Journal* 41, no. 4 (Dec 2007): 154.


On March 11, 2020, the World Health Organization, led by Ethiopian politician and community health specialist Tedros Adhanom Ghebreyesus, declared the novel coronavirus a pandemic. A few days later, journalist Richard Galant released an essay tellingly entitled “This changes everything.” He wrote that “[t]he response to the worldwide spread of the COVID-19 coronavirus upended all of our lives.” Tedros’s announcement sparked increased advocacy of “social distancing,” or the restriction of close interpersonal intimacy. Some disease control specialists remarked that social distancing could prove “particularly useful in settings where community transmission is believed to have occurred, but where the linkages between cases is unclear, and where restrictions placed only on persons known to have been exposed is considered insufficient to prevent further transmission.” However, the same disease control specialists expressed concern that some social distancing and more top-down forms of community containment like school closures could violate ethical principles and require “weighing [individual human rights] against the public health imperative.”


589 According to Ethiopian naming customs I have referred to Tedros Adhanom Ghebreyesus as “Tedros.”

As was the case with earlier epidemics discussed in this dissertation, contemporary pandemics like HIV and COVID-19 have witnessed the scapegoating of marginalized populations, usually alongside entrenched beliefs and convenient misunderstandings regarding the workings of the disease in question. In his monograph *Punishing Disease*, sociologist Trevor Hoppe made this connection between HIV and previous epidemics explicit. Hoppe argued that “the criminalization of HIV is but one of the more recent examples in public health history of an effort to control disease by coercion and punishment.” According to Hoppe, “[t]he war on drugs and the punitive response to HIV are but two examples of a more seismic shift in American corrections policy; lawmakers increasingly turned away from the rehabilitative spirit of the 1960s and 1970s in favor of far more punitive approaches that were rooted in retribution—or punishment for punishment’s sake.” The criminalization of HIV transmission, according to Hoppe, harkened back to quarantine laws of the eighteenth and nineteenth centuries. American studies scholar René Esparza picked up where Hoppe left off, examining how in the early days of the HIV crisis the American news media “mobiliz[ed] racist tropes of black sex workers as sexual predators—primarily, of ‘innocent’ white victims.” Esparza concluded, rightfully so, that “[t]o the extent the criminal justice system is ill prepared to manage epidemics, punishment ought not to be the response to infectious disease.

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Criminalization merely perpetuates discrimination and embeds outdated ideas about HIV into law.” 593

Of course, HIV only imperfectly parallels the epidemic diseases of the nineteenth century, but they were equally saturated with issues of intimacy, contagion, bodily fluids, and “filth.” During the COVID-19 pandemic, healthcare workers find themselves at risk of contracting disease through intimate care. Physical and sensory proximity so thoroughly pervade the caregiver-patient relationship that only layers of personal protective equipment (PPE)—at great expense—can protect healthcare workers’ wellbeing. Hoarding of PPE puts both healthcare workers and laypersons—especially the chronically ill—at increased risk of infection, a situation compounded by preexisting PPE shortages in many nations. 594

Responding to the theories of Hannah Arendt regarding the nature of the political as synonymous with the public, Johanna Hedva’s essay “Sick Woman Theory” speaks to the marginalization of disabled and chronically ill persons and the framing of such persons as apolitical. According to Arendt, “[i]ndifference to public affairs, neutrality on political issues, are in themselves no sufficient cause for the rise of totalitarian movements”; such apathy, such “bourgeois attitudes,” can just as easily give rise to “those forms of dictatorship in which a ‘strong man’ takes upon himself the troublesome responsibility for the conduct of public affairs,” a form of government more nineteenth-


Hedva’s Sick Woman Theory proposes a reevaluation of Arendt’s definition of the political and puts a queer spin on that rallying cry of second-wave feminism: “The personal is political.”

Hedva explained the concept of the Sick Woman who formed the core of their theorization of the political calculus of capitalism:

The Sick Woman is an identity and body that can belong to anyone denied the privileged existence—or the cruelly optimistic promise of such an existence—of the white, straight, healthy, neurotypical, upper and middle-class, cis- and able-bodied man who makes his home in a wealthy country, has never not had health insurance, and whose importance to society is everywhere recognized and made explicit by that society; whose importance and care dominates that society, at the expense of everyone else.

The Sick Woman is anyone who does not have this guarantee of care.

What the Sick Woman endures is a kind of medical as well as political marginalization:

“The Sick Woman is told that, to this society, her care, even her survival, does not matter.” The Sick Woman encompasses those individuals “who have been historically pathologized, hospitalized, institutionalized, brutalized, rendered ‘unmanageable,’ and therefore made culturally illegitimate and politically invisible.” This project, like the institutions it examined, has been populated by a diverse assortment of Sick Women, all of whom shared a status as, at one point or another, institutionalized political outsiders.

596 Hedva.
597 Ibid.
Anthropologist Hi‘ilei Julia Kawehipuaakahaopulani Hobart and media studies scholar Tamara Kneese opened their 2020 article “Radical Care: Survival Strategies for Uncertain Times” with the proclamation: “Care has reentered the zeitgeist.” Social media hashtags referencing self-care proliferated, they argued, in the mid-to-late 2010s. Hobart and Kneese asserted that, “[b]ecause radical care is inseparable from systemic inequality and power structures, it can be used to coerce subjects into new forms of surveillance and unpaid labor, to make up for institutional neglect, and even to position some groups against others, determining who is worthy of care and who is not.” But the theoretical definition of care put forth by Hobart and Kneese—“an affective connective tissue between an inner self and an outer world,” and “a feeling with, rather than a feeling for, others”—disregards the very same “negative affects” that Hobart and Kneese pointed toward in the introduction to their article. Nineteenth-century ideologies of care, “as both noun and verb,” American studies scholar Cotten Seiler has argued, “foregrounded empathy as whites’ signal evolutionary achievement and the font of their potential.”

What Hobart and Kneese neglected in their consideration of the meanings of care was the significance of the labor of being cared for when it comes to economies of care. In their essay, Hedva imagined a future when “we are all ill and confined to bed, sharing our stories of therapies and comforts, forming support groups, bearing witness to each other’s tales of trauma, prioritizing the care and love of our sick, pained, expensive,

sensitive, fantastic bodies and there is no one left to go to work.”600 Such a time would, they argued, bring about the end of capitalism, but it would also privilege the work of nursing—and of being cared for—over the work of physicians. I recognize that this dissertation cannot accomplish such a lofty goal. But in some ways, emphasizing the work of professional physicians is precisely what I wanted to do—not because it was more important than the work of other caregivers, but because it was these physicians who oversaw the maturation of the clinic—the very clinic built on the (coerced) complacency of the Sick Woman of Hedva’s theory, and sustained in part by the labor of those same Sick Women.

In Hedva’s words, “crucially: The Sick Woman is who capitalism needs to perpetuate itself … [b]ecause to stay alive, capitalism cannot be responsible for our care—its logic of exploitation requires that some of us die.”601 In the United States, many

600 Hedva.

601 Ibid. Hedva’s claim calls to mind the words of medical historian Paul Starr, who as early as 1982 wrote that “medicine is … unmistakably, a world of power where some are more likely to receive the rewards of reason than are others.” See Paul Starr, *The Social Transformation of American Medicine* (New York, N.Y.: Basic Books, 1982), 4. Hedva’s theory here also serendipitously transects with the work of Saidiya Hartman, who has argued that motherwork has been left out of many scholarly examinations of black labor. According to Hartman:

The forms of care, intimacy, and sustenance exploited by racial capitalism, most importantly, are not reducible to or exhausted by it. These labors cannot be assimilated to the template or grid of the black worker, but instead nourish the latent text of the fugitive. They enable those ‘who were never meant to survive’ to sometimes do just that. This care, which is coerced and freely given, is the black heart of our social poesis, of making and relation.

protestors and politicians opposed prolonged stay-at-home orders for fear of the financial consequences. Georgia governor Brian Kemp’s decision to allow many businesses to reopen in late April 2020—despite rising rates of infection, especially among disabled persons, chronically ill persons, and persons of color—laid bare the cold calculus of such cavalier attitudes: if reopening the economy meant risking the lives of Sick Women, then so be it.602

During the late eighteenth and early nineteenth centuries, the clinic needed its own Sick Women in order to mature: women, men, and children with diseases like yellow fever, cholera, and typhus. In places like Philadelphia, in settings like the Philadelphia Lazaretto, the Pennsylvania Hospital, the Philadelphia Almshouse and House of Employment, Walnut Street Prison, and Eastern State Penitentiary, the clinic was built upon their bodies. The work performed by physicians and caregivers—and patients—in those institutions precipitated tremendous advances in medicine; it is not my intention by any means to deny that. Nor is it my intention, as someone who benefits every day from “modern” medicine, to demonize it. Even so, the clinic, as it matured in the late eighteenth and early nineteenth centuries, grew up from a foundation of intimate care practices performed by or under the watch of physicians of a burgeoning professional class in coercive and carceral institutional settings.

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