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Ohio Valley History, Volume 16, Number 2, Summer 2016, pp. 21-40 (Article)

Published by The Filson Historical Society and Cincinnati Museum Center



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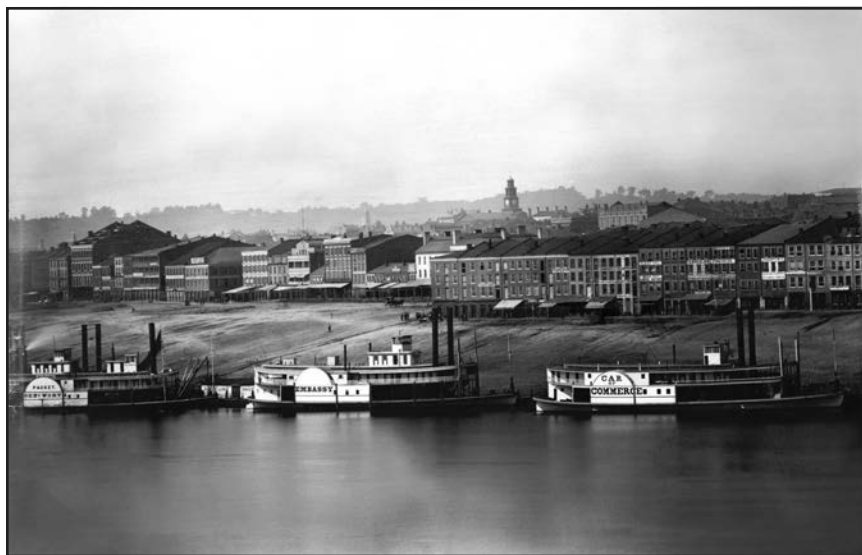
The Specter of Cholera in Nineteenth-Century Cincinnati

Matthew D. Smith

Before the Civil War, Cincinnati was one of the most flourishing cities in the United States, but epidemic outbreaks of cholera in 1832, 1849, and 1866 threatened a social and economic meltdown. Previously unknown beyond Asia, cholera was a disease of modernity, reflecting new pathways in immigration, transportation, and human settlement. Cincinnati's per-capita death toll was worse than that of almost any other major city in the United States, and containment proved practically impossible. The city's central location on the Ohio River left it continuously exposed to infection and reinfection. To make matters worse, cholera's impact radiated beyond the urban center, as waves of refugees spilled out across the Ohio Valley, spreading panic and disease wherever they went.

Cholera terrorized nineteenth-century Cincinnatians, but its ravages have left a surprisingly faint historical record. Unlike other American epidemics (smallpox, yellow fever, and even syphilis, for example), cholera barely has a history to call its own. Some aversion surely persists to an intestinal disease originating in fecal bacteria, and certainly cholera has never been a topic of "polite" conversation. Yet it deserves a second look, not only for its gruesome nature, but also as a barometer of society in the nineteenth century. In the twenty-first century, when a single Ebola fatality in the United States can trigger nationwide hysteria, the relative stoicism of nineteenth-century Americans in the face of cholera seems remarkable. Nevertheless, closer inspection blurs the contrast between the past and present. At the height of the deadly 1849 outbreak, for example, Cincinnatians fled their city in droves, many having lost faith in the authority of their political, medical, and religious leaders to keep them safe. The advent of the electric telegraph in the 1840s led to a plethora of daily newspapers (replacing older weekly journals), recycling alarming and often sensationalist accounts of cholera's grim progress. In the end, however, Cincinnati withstood the epidemic, despite fears of derailed development. The city's endurance spoke more to the resilience of citizens, traumatized as they were, than to any coherent political leadership or public health strategy. Cincinnatians resisted collapse, but their harrowing experience gives room to question the seemingly inevitable course of America's urban development.¹

Before the 1883 identification of the *Vibrio cholerae* bacteria, cholera's obscure origins fueled controversy and alarm among those charged with public health in Cincinnati. As late as 1865, one experienced local doctor complained to his colleagues: "I doubt whether I now know any more of the nature and treatment of Cholera, or of its contagiousness, than before. We have had histories, and even new theories, and some speculations.... The cause is interesting to scientific men, but we have little hope of discovering it." Such fatalism was not unique to the medical profession, and similar rhetoric punctuated local newspaper coverage of the epidemic. Cholera, declared the *Daily Gazette*, "appears here, there, everywhere, suddenly and often giving no warning." Even the canniest local observers, such as geologist John Lea, a habitual writer of letters to the press, struggled to explain epidemic patterns in Cincinnati and its hinterlands. "The capriciousness of the cholera," he admitted, "has been frequently a subject of remark and astonishment:—attacking *this* part of a city and not *that*; *this isolated family*, and not the *one on the farm adjoining!*" Although the disease's etiology was mysterious, certain patterns were evident, in particular its tendency to afflict the "lowest and dampest part of a city.... Crowded and destitute populations, damp and filthy locations." Such damp urban margins—immigrant slums and fetid backstreets—became the focus of Cincinnati's decades-long struggle to exorcise the specter of cholera.²



Cincinnati from the river, Porter & Fontayne's Panorama (c. 1848).

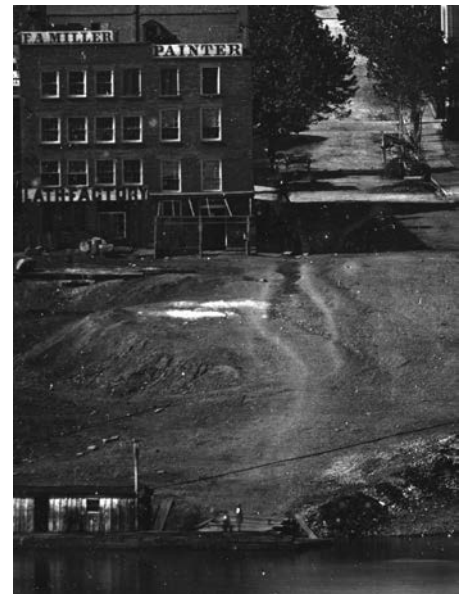
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Nowhere better illustrated the claim that "drainage is destiny" than Cincinnati. A remarkable 1848 daguerreotype panorama by photographers William S. Porter and Charles Fontayne powerfully evoked the city's precarious environment. Taken on a sunny September afternoon from a rooftop in Newport, Kentucky, this stitched image of eight glass plates (now displayed in Cincinnati's Public Library),

revealed the self-styled Athens of the West in spectacular detail. A rare glimpse of antebellum urban America, the panorama focused particularly on the foreground of the Ohio River, the artery of western commerce emblazoned with steamboats such as the *Meteor* and *Ohio Belle*. The city rose from the muddy landing, its slope pell-mell with boiler yards and lumber. Brick warehouses advertised their contents to passing boatmen and their passengers, signs promising “FOREIGN WINES & LIQUOR” and “RECTIFIED WHISKEY,” while set back from the river, church spires punctuated the skyline against the tree-lined backdrop of the city’s hills.³

The ghostly Cincinnati that Porter and Fontayne captured was among the largest and fastest-growing cities in the United States, but it was bedeviled by the ills of the day. One antebellum booster predicted: “Within one hundred years...Cincinnati will be the greatest city in America; and by the year of our lord two thousand, the greatest city in the world.” At the same time, alcoholism, violence, and crime festered below its facade. “Some fifteen years ago,” lamented the *Cincinnati Enquirer*, “a murder in Cincinnati was but a yearly event, and when one occurred, our citizens held up their hands in sorrow...[now] scarcely a week floats off that the bowie knife or the pistol ball has not laid a human being low with the dead.” Citizens linked massive overseas immigration with notions of contagion—both moral and physical—balking at “a plague of strangers” transforming the character of life in the city. Certain ethnic enclaves became notorious, including the Irish “Gas Alley” neighborhood, which was “filled with wretched hovels” and offered “more points of vice and depravity, in their most immoral forms, than any other point within the city limits.” Those neighborhoods closest to the river, the lifeblood of the city, thus became regarded with greatest suspicion.⁴

With hindsight, it is easy to identify the source of cholera hidden in plain sight in the 1848 panorama. One detail is especially revealing: as it tapered down the public landing from the corner of Lawrence and Front streets, a small channel discharged itself into the ground toward the Ohio River. Perched near some flotsam at the river’s edge below, two men gazed out at the sluggish water; fishing perhaps—in any case, standing still enough to be captured for posterity. The river was low on the day the photograph was taken, but it was prone to flood in heavy rains, when the dry tracks running from the filthy streets to the water’s edge became gullies of pollution, carrying runoffs of raw sewage and discharge from slaughterhouses crowding the tributaries of Porkopolis.



Cincinnati's Public Landing, Porter & Fontayne's Panorama (c. 1848).

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While Cincinnatians were ignorant of the source of cholera, they could certainly see—and smell—the environmental hazards in their midst. Cincinnati's sanitation problems lay at the heart of controversy between reformist public opinion, commercial and medical interests, and city government. And in September 1848—the same month Porter and Fontayne shot their panorama—Louis Wright, the Whig editor of the *Daily Gazette* complained that his city was “now looked upon, and with much truth, as the dirtiest city of its kind in the Union. Some of the gutters in the principal streets are so offensive to the eye and nose, as to make a walk along them disgusting.”⁵

For Wright and others, the cholera crisis pushed the question of sanitation into the public sphere as never before, at a time when municipal sanitation remained virtually nonexistent. What urban historian Martin Melosi called the “sanitary idea” had not yet fully crossed the Atlantic, and the relationship between disease and filth, the focus of social reform for English utilitarians like Edwin Chadwick, remained obscure well into the nineteenth century. Municipal authorities in Cincinnati focused more on public nuisance than public health, and while the city assumed responsibility for street cleaning in the public marketplace and a few other strategic locations, even that service was outsourced to private contractors in 1844. Environmental protection legislation was an almost alien concept, moreover, at the federal and state level. The city had taken some modest measures, beginning with an 1802 ordinance aimed at “*preventing carrion from laying in any of the streets, lanes, allies or commons of the town*” but such bylaws left larger problems unsolved. Water pollution was the outstanding public health issue in early Cincinnati, and it fell on the newspaper press to highlight the question, however haphazardly. Thus, in 1811 one local newspaper first urged the creation of a sewer system, noting that runoff into the Ohio River left “the water along the shore of the western part of the town...unfit for many domestic uses.” Echoing such concern, in 1819 another editorial described the city's streets as a “cinque of pestilence and disease.” Throughout the antebellum period, Cincinnati's sewerage issue lingered like a stench over the political landscape.⁶

Improvements in Cincinnati's water infrastructure focused on quantity rather than quality. At the city level, private enterprise stepped in to fill the gaps in public demand. A joint stock-funded enterprise, the Cincinnati Water Company (1826), constructed a steam-driven pump house below Mount Ida (later Mount Adams), which funneled Ohio River water to a hilltop reservoir three hundred feet above the low-water level, where a network of iron pipes irrigated the growing city. The aqueducts of imperial Rome, however, these waterworks were not. In spite of their mechanical ingenuity, they unwittingly recycled the riverine filth of the Ohio, aiding the spread of waterborne disease. By around 1850, this network supplied some thirty-five thousand Cincinnatians, around a third of the city's burgeoning population. The remainder relied on rainwater cisterns or artesian wells, the latter often reservoirs of untold pathogens deadlier than those in the river.⁷



Cincinnati Water Works, Porter & Fontayne's Panorama (c. 1848).

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As Cincinnati grew, the surrounding region developed around it, increasingly stimulated by ambitious federal funding for internal improvements, including turnpike roads and, crucially, canal systems. Following construction of the Miami and Erie Canal in the late 1820s, Cincinnati's population swelled. By 1850 some 44 percent of the city's population had been born outside the United States, mostly in Germany and Ireland. Even as the Queen City's bustle assailed visitors' senses, its immigrant energy fascinated the outside world. At the same time, social upheaval stirred growing unease and nativist sentiment among the local population. The French chronicler Alexis de Tocqueville asserted: "All that there is of good and bad in American society is to be found there in such strong relief, that one would be tempted to call it one of those books printed in large letters for children to read; everything there is in violent contrast, exaggerated; nothing has fallen into its final place: society is growing more than man." Meanwhile, local papers such as the *Cincinnati Journal* took a gloomier view of the "migratory nature of our citizens," rendering Cincinnatians "almost strangers to one another."⁸

Nor was Cincinnati's strangeness limited to its human population. The slaughtering and packing of hogs was the city's leading industry through the antebellum period, lending the Athens of the West its perhaps more apposite moniker, "Porkopolis." As early as the mid-1830s pork and lard exports were worth

more than \$300,000 to the city, and by the eve of the Civil War some six hundred thousand of these semi-feral beasts were slaughtered there annually. As one traveler noted: “All Cincinnati is redolent of swine. Swine prowl about the streets and act the part of scavengers until they are ready to become merchandise and visit Europe.” With huge surpluses of corn distilled into whiskey or consumed by pigs awaiting slaughter, commercial farming transformed the Ohio Valley, although the practice of turning swine onto unharvested ripened corn was still denounced as shockingly “unfarmerlike.” More of the surplus went on to distilleries, which typically kept a handful of pigs to consume the slops, to the ire of temperance advocates. Distillery pigs, wrote one, were “a fine lot of toppers—dirty, bloated, red-eyed, ears and noses bloody and slit to pieces in their drunken fights. They were once doubtless decent hogs, but whiskey had ruined their morals.” While such anthropomorphism hinted at moral preoccupations, a far more tangible problem for the city was the accumulation of swine dung and other animal waste. The surrounding Ohio Valley farmland was considered too fertile to justify shipping out this valuable manure, and so its manure was often simply shoveled into the river, contributing to a lethal bacterial ecosystem.⁹



Journey to the Slaughterhouse (c. 1860).

CINCINNATI MUSEUM CENTER

Cholera first struck Cincinnati in 1832. Victims experienced “profuse discharges of like rice-water from the stomach and bowels,” often accompanied by a blue-gray discoloring of the skin, seizures, and death from fluid loss within forty-eight hours. Perturbed Cincinnatians followed “the great scourge of cities”

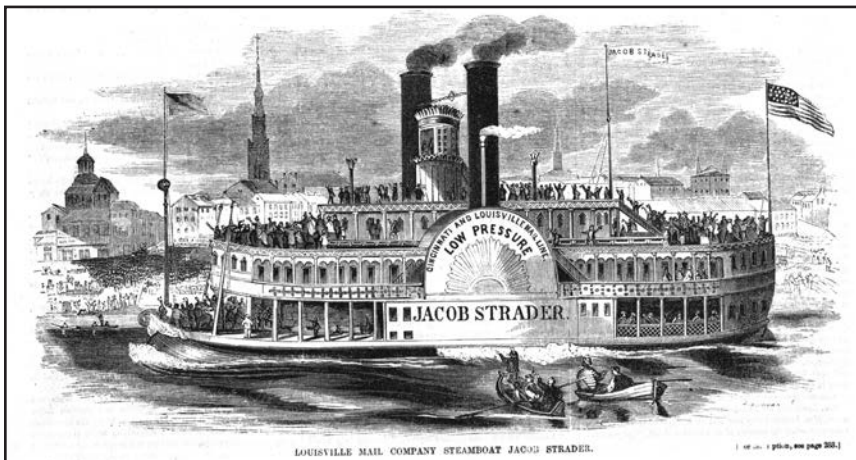
as it struck from Quebec to the Great Lakes, along the Atlantic Coast, and up the Mississippi to the Ohio Valley. Some 2 percent of Cincinnati's roughly thirty thousand people died. Despite renewed calls for public health reform, the city's response was predictably lackluster, reflecting the laissez-faire spirit of the times. The only significant exception to such inaction was an Ordinance to Establish a Board of Health, enacted that June, creating a seven-member panel of physicians charged with collecting information and complaints and overseeing the city marshal's enforcement efforts in any declared public health emergencies. Under the influence of Daniel Drake, protégé of the renowned physician and Founding Father Benjamin Rush, the board played a role for years.¹⁰

Cholera made its unwelcome return to Cincinnati on Christmas Day 1848, when a dying man was carried from the *Lewis Wetzel*, a New Orleans steamboat moored at the public landing. The sickness he brought with him began to spread in January of 1849, just as the first epidemic was fading from public memory. An editorial in the *Daily Gazette* that month mentioned the incident but reassured readers "to go quietly about their ordinary occupations." Nobody, it seemed, expected another catastrophe on the scale of 1832's, but this particular outbreak, originating in the Ganges basin and spreading like wildfire through Central Asia, Europe, and the Middle East proved among the world's deadliest pandemics.¹¹

The *Daily Gazette's* initial reassurances on the eve of this calamity reflected the generally sanguine outlook of Cincinnati's medical authorities. A report for the fledgling American Medical Association the previous year described a city of 110,000 residents in "very good" health, although noting that, "especially among our German population, cholera infantum [a catchall term used for childhood dysentery] is very fatal during the hot months." With the return of Asiatic cholera (cholera proper), the local press at first minimized the crisis. "The general health of the city is now good," asserted the *Daily Gazette* as late as April, "and all reports to the contrary are sheer fabrications." While isolated cases were inevitable, fears of a major epidemic were described as "a perfect tempest in a teapot," puffed up by swirling hearsay. The editor of the *Daily Atlas* blamed "telegraphic rumors and the exaggerated statements of [steamboat] passengers" for stoking the epidemic scare.¹²

At the same time as daily commercial newspapers decried the telegraphic twitter of rumor and misinformation surrounding the spread of the epidemic, they inadvertently fanned the very flames they sought to douse. Cincinnati was not an isolated urban community but a central link in a national network of transport, migration, exchange, and contagion. Cincinnatians could hardly be blamed for their concern, moreover, given reports of cholera's alarming progress from the Atlantic and the Gulf of Mexico into the North American interior. One newspaper, for example, reported in March 1849, "Cholera has been very prevalent on steam-boats arriving [at Louisville, Kentucky] from New Orleans since Saturday," when "the weather was hot and sultry and much sickness prevailed, principally

among emigrants.” A correspondent to the *Daily Gazette* described “a short steamboat trip” during which passengers to Wheeling, Virginia, were “engrossed” by the topic of cholera. “Their several reports of ‘death’s doings’ in the aggregate, caused many a countenance to bear an expression of uneasiness and anxiety,” the report went on. Many of the passengers had recently arrived from New Orleans, and “each succeeding witness...surpassed his predecessor in [describing] the number of deaths, the fatal type of the pestilence, and last, but not less prominently, the perils and dangers on land and water.” Such stories were the grist of Cincinnati journalism, but in highlighting the river-borne progress of cholera in other cities, local editors surely eroded confidence in the Queen City’s invulnerability.¹³



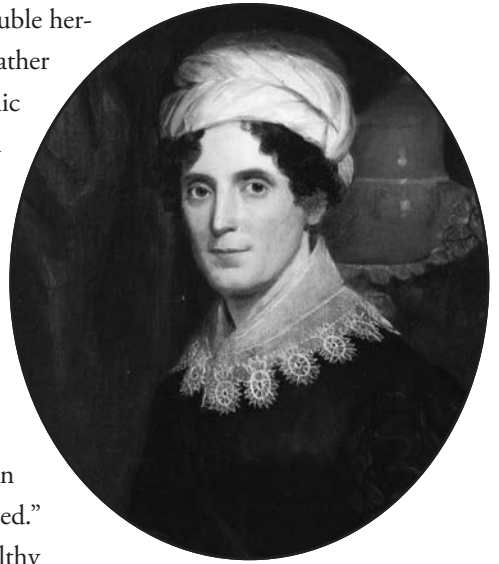
Steamboat on the Louisville to Cincinnati Mail Line (c. 1854).

FILSON HISTORICAL SOCIETY

On May 16, 1849, the *Daily Gazette* published a short notice by Daniel Drake officially acknowledging the epidemic status of cholera in the city but urging a calm public response. As Drake explained: “there having been numerous exaggerated reports of the ravages of that dreaded disease, Cholera, in Cincinnati, the Board of Health was called upon by the daily papers to ascertain the actual state of affairs in this particular and make daily reports.” While the board honored its responsibility to report on the spread of the disease, its recognition came around four-and-a-half months *after* it first entered the city. While a relative lull in early infection no doubt persuaded them that the initial outbreak was manageable, the city’s physicians did remarkably little to prepare citizens for the catastrophe on the horizon. The board’s admission, moreover, that the eventual announcement was in response to calls from the local newspapers highlighted its ad hoc reaction in the absence of strong municipal or other governmental authority.¹⁴

From the outset, cholera stirred up a mixture of alarm, denial, and defiance. Many ignored the disease in the early months. In January 1849, Stephen Foster, the famed American songwriter then resident in the Queen City reassuringly wrote a

childhood friend: “Tell Ma she need not trouble herself about the health of Cincinnati, as our weather here is very healthy.” Even as the epidemic flared up later that year—it was a humid summer, even for southwest Ohio—a reassuring tone prevailed in the private correspondence of many Cincinnatians. Much of this assurance was tinged with ethnic and socioeconomic complacency. One man wrote his wife in July that 130 people had died the previous day. “But do not be alarmed,” he added. “They are mostly German and Irish. Very few whom we knew have died.” The previous month, Margaret Lytle, a wealthy Protestant matriarch, described how cholera was causing “quite a panic” in the streets, noting “several cases have no doubt occurred—generally among the labouring classes.” None of her acquaintances, she explained, had yet died, except for one “Col. Bruff,” an elderly roué who had indulged in strong liquor the night before his final illness.¹⁵



Margaret Lytle (1772-1851).
CINCINNATI MUSEUM CENTER

Local newspapers reinforced prevailing misconceptions, portraying cholera as almost exclusive to immigrants and the poor. Even the socially conscious *Daily Gazette* joined the chorus, calling it “undeniable that Cholera is mainly confined to the poorer classes, and it is equally susceptible of proof, that the mortality is nearly exclusively restricted to that portion of the population.” The typical “working man,” it went on, “pays no attention to diet or regimen, is not particularly attentive to personal cleanliness, and eats anything that comes before him.—Hence he is naturally a fit subject for the disease.” Such generalizations in the city’s leading commercial daily were revealing. No longer was Cincinnati the republican city on a hill of its early years, synonymous with “industry, temperance, [and] morality.” Beleaguered by epidemic disease and class division, its citizens were quick to blame one another for their misfortunes.¹⁶

As cholera progressed, the local press stood accused by rivals in outlying towns of conspiring with city merchants and politicians to mislead the public. In their defense, Cincinnati newspapers accused these outsiders of seeking to tarnish Cincinnati’s reputation. The cholera crisis certainly exposed fault lines between the Queen City and its hinterlands, jealousies that the *Daily Gazette*, for one, exposed to public scrutiny. On January 9, 1849, for example, editor Louis Wright acknowledged the first cases of cholera in his city. Alongside this acknowledgment, he republished an editorial from the Indiana *Connerville Telegraph*, which claimed: “The Cincinnati papers deny the existence of cholera in that city. We know not how to regard their statements—to keep the fact of the presence of this

scourge of humanity in their midst, concealed from the people of the country—on whom they have to depend for their produce &c, and who in a great measure keep up the business of the city. Our private accounts from Cincinnati, however, differ very materially from the newspaper reports—they representing the cholera as raging with fearful fatality.”

Wright heaped scorn on such “very exaggerated accounts” then circulating in the Hoosier press and elsewhere, calling for a more measured response instead. He insisted that Cincinnati’s public health crisis was manageable, and that the struggle against cholera offered opportunities for lasting social reform. Daniel Drake and other leading members of the city’s medical and political communities echoed Wright’s calls for calm by emphasizing the social and physical perils of mass hysteria. Drake identified the fear of contagion as an “exciting cause” in sapping both public morale and the actual immune system of potential victims. One of his followers went further, describing “*fear of cholera*” as deadly in itself, even among the otherwise healthy. His widely republished advice to citizens was stoic, urging “*no one leave the city* because the epidemic has come.... [I]t is not, like small pox, a catching disease, if it were, being out of the city would be a preservative.”¹⁷

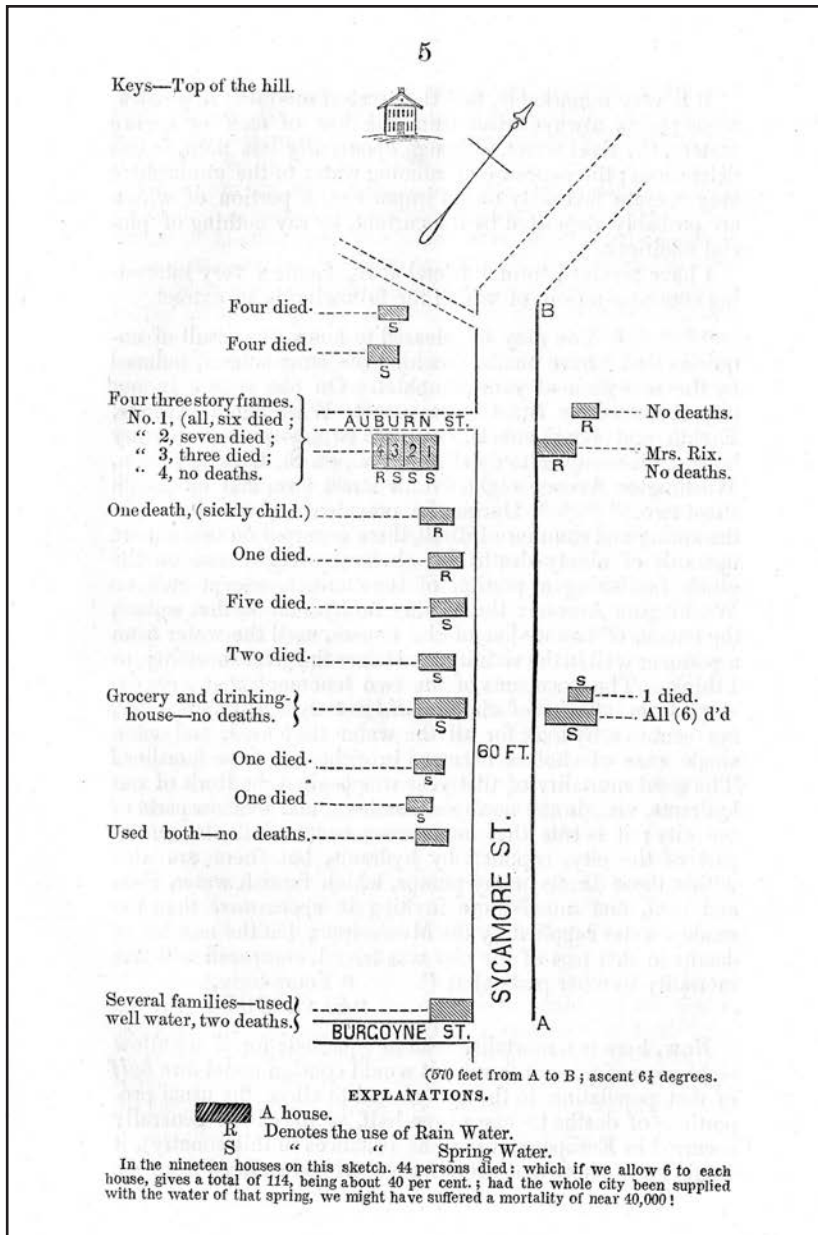
Downplaying risk served social as well as medical ends, tamping down fears that Cincinnati was a hotbed of disease, and underlining how deeply economic interests prevailed. The Queen City was more than just a commercial center: commerce defined its very sense of being, and the success or failure of its market economy drove all other concerns. As local editor James Hall observed, this identity gave rise to its own vocabulary and outlook. “The resources of this city,” he argued, “are controlled chiefly by that class which, in our peculiar phraseology, we term ‘the business community.’”¹⁸

Despite efforts to promote calm, panic broke out wherever cholera struck. This reign of terror was particularly pronounced in outlying towns and villages. Twenty-five miles downriver from Cincinnati, Aurora, Indiana, was virtually depopulated after sixteen hundred of its two thousand residents fled in the summer of 1849. In Eaton, Ohio, some forty miles north of Cincinnati, more than eighty houses were abandoned by August, and 28 people died in a single week, while the remaining 544 residents numbered just 40 percent of the next year’s census total. Even the clergy were not immune to panic. One minister who remained, for example, vigorously denied newspaper reports “that *all* of the pastors of the Churches of that town deserted their flocks.” Citizens of Lafayette, Indiana, agonized meanwhile as the cholera spread along the Ohio and Wabash rivers. While the local newspaper republished articles from the Cincinnati press downplaying the risk of contagion, at least half of Lafayette’s six thousand people fled at the arrival of the cholera, repeating a pattern found throughout the Ohio Valley. Although there were relatively few foreign-born immigrants in Lafayette and other small towns, the local press and clergy fixated on their role in incubating the disease, just as they did in Cincinnati.¹⁹

Once cholera was acknowledged, Cincinnati's English-language press consistently emphasized its impact among the poor, immigrants, and racial and ethnic minorities. In an article titled "Can Anything Be Done?" Louis Wright portrayed the disease as exclusive to "parts of the city...we know the least about...occupied by the poor and by strangers." Wright called for streets to be "cleansed" and for the urgent establishment of citizen committees to visit the sick and to report on cleanliness "in the streets, in the lots, [and] in the houses." While Wright refrained from advocating quarantine measures for newly arrived immigrants (as was common in New Orleans and other cities), he described these newcomers in pathogenic terms. Many of them lived "crowded, whole families, in a single room, used for cooking and for sleeping." They were "strangers among us—strangers to our language and to our habits," who knew "not what to do, nor where to seek relief." Not only did they embody physical danger to the city, they also desperately needed integrating into society. As Wright asked, only half-rhetorically: "Can nothing be done for these, our unfortunate fellow beings? Should they be left thus to suffer—to die?"²⁰

The cholera of 1849 was worse than anyone had feared, killing some 6,000 of Cincinnati's 115,000 inhabitants, or more than 5 percent of the population. Thanks to overcrowding and pollution, the proportionate death rate in Cincinnati was roughly triple that of smaller Ohio cities, like Cleveland and Columbus. And while urban size and density were key factors in the spread of disease, mortality rates in Cincinnati outweighed those of New York and London. The Queen City's river location, poor sanitation, and unfettered livestock all magnified the pestilence. Across the spectrum, immigrants, the young, the elderly, and the poor suffered most, and fears of widespread panic were borne out by the estimated ten thousand refugees who failed to return in time for the city's census the following year.²¹

Historians have identified two main medical interpretations attempting to explain the spread of cholera before the advent of germ theory. The first of these was the so-called contagion theory, positing that cholera spread from person to person. Second was the "anti-contagion," or miasma, theory, which identified airborne toxins as the culprit. The latter theory prevailed in the Ohio Valley, where Daniel Drake held sway over medical orthodoxy. He blamed the cholera on animalcules, or microscopic organisms, which became active under particular noxious atmospheric conditions. While these superficially resembled what we would call bacteria, their distinguishing characteristics were unobserved and therefore essentially mysterious. Meanwhile, medical authorities widely shared Drake's focus on atmospheric rather than waterborne pollution, encouraging a host of ultimately futile preventive measures, including the burning of braziers and bonfires in the city's streets and courtyards.²²



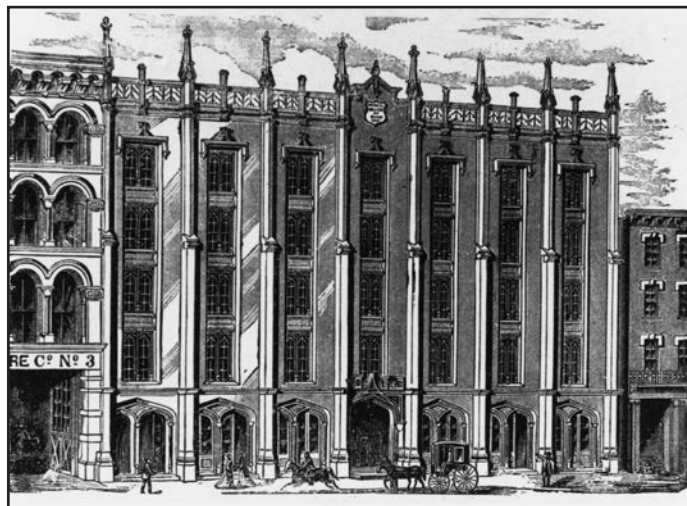
“Cholera: The Geological Theory,” pamphlet by John Lea, reprinted from the Western Lancet, (c. 1851).

CINCINNATI MUSEUM CENTER

In spite of Drake’s professional authority and the best efforts of the city’s Board of Health, antebellum Cincinnati remained an unregulated and often chaotic medical marketplace. In addition to supposedly reputable practitioners of allopathy, or mainstream medicine, the city housed a bewildering diversity of physicians, with one contemporary lamenting the abundance of “Homeopathic, Eclectic, Indian, and Negro doctors” then catering to public demand. Against such variety, Drake swore by “the tried and true therapeutics,” declaring “those who disdain them from their velvet perches...traitors to the Hippocratic tradition.”

During the cholera epidemic, indeed, he sought to prosecute those alternative therapists whom he believed brought his profession into disrepute. Chief among these were the practitioners of homeopathy, an increasingly fashionable therapy involving small (and generally benign) doses of tinctures to counter a wide range of diseases, including cholera. By contrast to the nuanced quackery of the homeopaths, Drake's "tried and true therapeutics" included such heroic measures as bleeding impurities from diseased veins and inadvertently poisoning patients with calomel, or mercurious chloride. Compared with the drastic interventions of mainstream medicine, then, homeopathy was perhaps the lesser of two evils, but Drake was convinced it needed suppressing nevertheless.²³

Predictably, the medical profession in antebellum Cincinnati cleaved along sectarian lines. As one contemporary observed, moreover, "nearly all the German practitioners are Homeopaths." In the midst of the 1849 epidemic, Drake was convinced these homeopaths and others were deliberately downplaying the fatalities of patients under their care. At his prompting, in May the Board of Health brought civil charges against some half dozen "Homeopathic" and "Eclectic" physicians, charged with failing to report cholera deaths to city government. The most notable indictment was against Joseph Hippolyte Pulte, a German physician who faced penalties of up to \$500 along with his co-accused. Perhaps not coincidentally, Pulte also ran a private medical academy in the city, which competed with the Medical College of Ohio, founded by Drake in 1819. In any case, the legal challenge asserted the prestige of orthodox medical science against the pseudo-scientific interloping of foreign quackery, championed by immigrant physicians. While the cultural ramifications were obvious, unfortunately for Drake and the Board of Health the prosecuting evidence was weak. Cincinnati's mayor heard the indictment before summarily dismissing the case against Pulte and his followers.²⁴



Medical College of Ohio (c. 1800s).
CINCINNATI MUSEUM CENTER

Shifting attention from their own shortcomings, many Cincinnati physicians increasingly focused on immigrant lifestyles, identified with an increased susceptibility to cholera and other diseases. According to one doctor, the typical immigrant exhibited “not only filthy habits in his mode of living, but...a peculiar inclination to avoid ventilation.” He blamed “various kinds of unwholesome food, and, above all, the facilities for an indulgence in strong drink,” for mortality among the Germans. In contrast to a rich diet of sausage, alcohol, and pickled kraut, Drake prescribed a “plain and digestible” alternative, including “codfish with potatoes...macaroni prepared with cheese...stale bread and crackers,” as well as “mealy potatoes, well boiled hominy and rice.” Salted meat was considered preferable to fresh, and while Drake deemed “sweet milk, tea, coffee and chocolate” acceptable, he frowned on alcohol, especially “sour wines” and spirits.²⁵

While sanitary nativism of the sort promoted by Drake and other leading physicians reflected a general blurring of the boundaries of science and sectarian identity, this was motivated less by religious ideology than a hardening of certain cultural attitudes. First, cholera helped stoke a growing temperance movement, which castigated drink as the scourge of immigrant life and of the urban poor in general. Increasingly, total abstinence from all intoxicating beverages became a tenet of this movement, marginalizing moderates such as Drake and the Rev. Lyman Beecher, both of whom enjoyed the occasional glass of wine with dinner. One teetotal physician, by contrast, wrote to the *Daily Gazette* to denounce as “an error to consider brandy or alcohol, taken in *moderation*, as necessary to ward off the attack of cholera, and...a *sin* for doctors and editors to recommend it.” Instead, he urged readers to “eat good plain food; drink good tea and coffee; fear God and feel pleasantly towards your neighbor...and you will do very well in Cholera times.”²⁶

While many Cincinnatians turned to religion for solace, the city’s religious leaders were careful not to step too far beyond the bounds of the pulpit. Patent medicine, not paternosters, was the first line of defense against cholera, and religiosity was promoted primarily for spiritual, not medical ends. Nevertheless, the response of the Queen City clergy reflected some attempts to assert moral and political authority. At the height of the cholera epidemic, for example, “a number of ministers of different denominations” petitioned Cincinnati’s Mayor Henry E. Spencer to declare July 3 “as a day of Fasting, Humiliation, and Prayer.” Though apparently ecumenical, the nine signatories represented a narrow slice of the religious landscape, numbering just three Episcopalians, three Presbyterians, two Methodists, and a token Baptist. The Catholic clergy was notable by its absence, as were Jewish and other minority religious groups. Even still, Spencer—a good Protestant Whig—unstintingly gave the ministers’ request his (and the city’s) seal of approval. While this approval was expedient, the underlying impulse for self-preservation echoed the devout angst of the nation as a whole. One month after Cincinnati’s civic atonement, President Zachary Taylor assumed the role

of minister in chief and declared the first Friday of August 1849 a national day of fasting, humiliation, and prayer—something his predecessor Andrew Jackson had declined to do during the cholera outbreak of 1832.²⁷

Cincinnati's municipal leadership was limited in 1849, and in any event, crisis did not automatically translate into reform. Elected leaders used every means to assuage public opinion and return business as usual to the streets. The efforts of the Board of Health and local citizens, however, had some impact. As early as 1836, at the behest of the Ohio legislature, Daniel Drake successfully petitioned the U.S. Congress for "the establishment of Western commercial hospitals" along the Ohio and Mississippi Rivers to tackle the problem of cholera transmitted via steamboats. By 1861 the federal government had built nearly a dozen such institutions, including Cincinnati's first dedicated cholera hospital (1850), supervised by the Board of Health and offering a relatively clean environment for the city's poorest citizens. Other reforms were more fleeting, including efforts under board supervision to intensify street cleaning and other services. No sooner did the disease decline in 1849, however, than critics decried "a manifest abatement in attention to the cleanliness of the city."²⁸

In retrospect, Cincinnati's response to cholera in 1849 seemed toothless, but the reality was more complicated. While the struggle underscored weaknesses in Cincinnati's medical profession, many individual physicians acted in good faith and with great courage. Several even paid with their lives, including the unfortunate J. P. Harrison, who had extolled the Queen City's rude health to the American Medical Association in 1848. Admittedly the medical practice of many doctors was bizarre, if not downright dangerous. Drake, for example, recommended that cholera victims be laid out for extended periods in case they were not dead but merely in "suspended animation" (like his contemporary Edgar Allan Poe, Cincinnati's leading doctor seemed morbidly obsessed with premature burial). At the same time, however, Drake's status as "the Benjamin Rush of America's West" owed more to his legacy as a civic leader and founder of the Medical College of Ohio (which became the University of Cincinnati College of Medicine) than to any specific therapeutic innovation.²⁹

Cincinnati's most promising scientific contribution to the fight against cholera came from an unlikely source. In 1850 John Lea, a local geologist, mapped out and described the recent epidemic, detailing the incidence and concentration of cholera cases and fatalities street by street and house by house through the city. Lea corresponded tirelessly with the local press over the course of the year, expounding his theories of epidemiology, "but my communications," he complained, "have met with little favour—the thing is too simple—the mystic theories of *ozone*, *zumosis*, *fungi*, &c. are better adapted to the prevailing taste for the marvelous." More than a century before the development of modern geographic information science, Lea persuasively identified patterns linking infection to

water supply. In particular, he identified artesian wells as susceptible to choleric contamination, which he ascribed to the “*calcareous*” nature of soft water, while noting, “I have not yet had reason to believe that a single individual has deceased who used rain water [stored in cisterns] *exclusively*; and I believe the same remark will apply to the use of water that has been *boiled*.” Lea traveled door to door interviewing families and neighbors of cholera victims, and a small sampling of his interviews illustrated the report, contrasting the survival of rainwater drinkers to the mortality of those drinking from the wells. A family in cholera-infested Walnut Hills, for example, “enjoyed uninterrupted good health throughout the prevalence of the epidemic.” A family of German immigrants in Over-the-Rhine, meanwhile, suffered nine deaths in the confines of its small house. One survivor explained: “We use the cistern to wash with, and we drink always the well water.” While Lea did not suspect the bacteriological basis of cholera (the lethality of Cincinnati’s wells in fact reflected groundwater pollution, not geological qualities per se), his recommendation of cisterns and boiling water was a triumph of empirical investigation, not to mention prodigious legwork.³⁰

Had Lea’s recommendations been adopted in Cincinnati and elsewhere in the United States, tens of thousands of lives might have been saved over coming decades. His report, however, was widely overlooked and remains at best a footnote in the global historiography of cholera and public health. Lea’s tragic obscurity was not inevitable but reflected contingencies of time and place. Around the same time as his groundbreaking study, a separate investigation by Dr. John Snow in London, England, likewise connected cholera to polluted drinking water. In Snow’s case, however, scientific findings produced tangible reform leading to the passage of the 1852 Metropolis Water Act by the British Parliament and pioneering laws mandating the introduction of municipal water filtration technology. As Martin Melosi has noted, the emergence of the “sanitary idea” (and the political will to enforce it) was spearheaded in Great Britain, but systematic reform gained worldwide currency as its practical benefits emerged.³¹

Even as sanitary technology and ideas filtered across the Atlantic, bloodier concerns captured the attention of Queen City residents. As the nation reeled from the slaughter of the Civil War, its upheavals reshaped the landscape of America right down to the fabric of its environment. A third cholera epidemic swept the nation in its wake, during which some 2,028 Cincinnatians, approximately 1 percent of the city’s total population died. Though calamitous, the 1866 epidemic was markedly less deadly than outbreaks in 1832 and 1849. Given the susceptibility of war-torn populations to disease (for example, as in the 1919 Spanish flu epidemic) such relatively limited mortality is surprising. Some explanation can be found amid local and national developments in civic infrastructure and technology, which played a key role in the decline of cholera. Among the practical milestones was the growth of the railroads,

which lessened dependence on water transit in the Ohio Valley. Though cholera could and did travel by rail, its natural medium was water, and the feculent environment of steamboats and riverside slums remained its deadliest breeding ground. Another milestone in Cincinnati was the development of a city sewer system, supported by state legislation after 1863, which quickly reduced contamination of public water supplies. All these developments were stimulated in some degree by the economic exigencies of the Civil War, which laid the foundations of modernity amid the devastation of the nation. Nowhere was this more vividly illustrated than in the growth of America's communications infrastructure, connecting Cincinnati to a telegraphic information superhighway. When cholera arrived in New York in May 1866, for example, more than fifty cable lines connected the offices of that city's Metropolitan Board of Health to health authorities across the nation, enabling the disease to be successfully tracked as never before.³²

Advances in scientific understanding, growing political leadership, and an increasingly organized medical profession all contributed, however imperfectly, to the war against cholera. In 1857, for example, local physicians established the Academy of Medicine of Cincinnati, a body dedicated to "the investigation and discussion of such subjects as vital statistics, public and private hygiene, adulterations of food, progress in medicine and surgery, the conditions of the atmosphere in relation to epidemics, original observation of disease, [and] encouragement of medical scholarship." Despite such lofty goals, however, the academy's immediate impact on cholera was slight. "We don't know what [cholera] is," admitted one member to his colleagues in 1865. "The whole practical question is how to meet and combat it."³³

Cholera made its last significant return to Cincinnati in 1873. This fourth epidemic was likely a flare-up of its 1866 predecessor, which had first originated among Muslim pilgrims at Mecca and had become endemic in the Middle East. It broke the almost biblical seventeen-year cycle of previous outbreaks across the United States, appearing so haphazardly that physicians referred to it as "cholera sporadica." This time its toll was limited to 207 deaths in Cincinnati and was concentrated, one local doctor reported, "chiefly among the floating population and emigrants." Another Board of Health physician, J. J. Quinn, observed "no panic in the streets, and few cases could be attributed to fear, a proximate cause in the cholera epidemics of 1849 and 1866." Unlike during previous outbreaks, he added, there was no large exodus of refugees, the city was "in a fair and sanitary condition," and "except in cases taken from steamboats...no stranger in the city died of the disease." Among the victims, Quinn concluded, "an exciting cause could generally be discovered, in inattention to diet, in the over-crowded condition of the dwelling, in the sanitary surroundings of the patient, or in violation of some of the laws of hygiene."³⁴

As medical literature revealed, understanding of cholera remained cloudy by the latter part of the nineteenth century, and cultural attitudes were slow to change, but conditions on the ground had improved substantially. The specter of cholera had come and gone, but, ironically, this declining mortality coincided with the Queen City's waning national significance. The railroads were replacing America's rivers and canals as commercial arteries, while larger and more impressively modern cities, like Chicago, rose elsewhere. The Queen City was no longer destined to become the greatest city in the world, but its survival through the deadliest plague of the century was cause enough for thanksgiving.

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- 1 Revealingly, the most recent book-length scholarly survey of cholera epidemics in the United States, Charles Rosenberg's *The Cholera Years*, is rather dated. Published in 1962 and republished in 1987 with a new afterword by the author, this study remains the outstanding secondary source, despite its disproportionate focus on cholera in New York City. See Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (1962; rep., Chicago: University of Chicago Press, 1987). The only other major national history of American cholera is nearly eighty years old; see J. S. Chambers, *The Conquest of Cholera: America's Great Scourge* (New York: Macmillan, 1938). Alan I. Marcus's *Plague of Strangers: Social Groups and the Origins of Social Services in Cincinnati, 1819–1870* (Columbus: Ohio State University Press, 1991) is an exception to the general neglect of cholera in the Queen City, exploring how the disease intersected with other social issues, including immigration and organization of public health. The global historiography of cholera is naturally more expansive, although beyond the immediate scope of this article. Among recent books, S. L. Kotar and J. E. Gessler's *Cholera: A Worldwide History* (Jefferson, NC: McFarland, 2014) is a well-researched popular history of the disease, containing much information on the United States, despite its global focus. Finally, a new book on cholera by sociologist Owen Whooley explores how cholera stimulated the development of professional medical networks, most notably the American Medical Association; see Owen Whooley, *Knowledge in the Time of Cholera: The Struggle over American Medicine in the Nineteenth Century* (Chicago: University of Chicago Press, 2013).
 - 2 *Cincinnati Lancet and Observer* 8 (1865), 238; *Cincinnati Daily Gazette*, cited in *Boston Medical and Surgical Journal* 41 (1849), 123; John Lea, "Reprints and Reflections: 'Cholera, with Reference to the Geological Theory: A Proximate Cause—a Law by Which It Is Governed—a Prophylactic,'" *International Journal of Epidemiology* 42 (2013), 37; L. M. Lawson, *Cholera: Its Nature and Treatment* (Cincinnati: Robinson & Jones, 1848), 15.
 - 3 Andrew R. L. Cayton, "Artery and Border: The Ambiguous Development of the Ohio Valley in the Early Republic," *Ohio Valley History* 1 (2001), 19. A high-resolution digitized version of Porter and Fontayne's panorama is available on the Public Library of Cincinnati's website. "Cincinnati Panorama of 1848," Public Library of Cincinnati and Hamilton County, accessed Nov. 19, 2015, <http://1848.cincinnati.library.org/showplate.php?id=1>.
 - 4 J.W.S., appendix A to Charles Cist, *Cincinnati in 1841: Its Early Annals and Future Prospects* (Cincinnati: n.p., 1841), 275; *Cincinnati Enquirer*, June 25, 1853. For discussion on the prevailing rhetoric of immigrants as "strangers," see especially Marcus, *Plague of Strangers: Cincinnati Commercial*, July 20, 1853, quoted in Jed Dannenbaum, *Drink and Disorder: Temperance Reform in Cincinnati from the Washingtonian Revival to W.C.T.U.* (Urbana: University of Illinois Press, 1984), 74. Other notorious Cincinnati neighborhoods included "Rat Row" along the wharf, and the nearby German "Sausage Row," between Broadway and Ludlow Street.
 - 5 *Cincinnati Daily Gazette*, Sept. 13, 1848.
 - 6 Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Baltimore: Johns Hopkins University Press, 2000), 12; Marcus, *Plague of Strangers*, 96–97; *Western Spy and Hamilton Gazette* (Cincinnati, OH), July 24, 1802; *Western Spy* (Cincinnati, OH), June 15, 1811; *Inquisitor and Cincinnati Advertiser*, June 1, 1819, quoted in Daniel Aaron, *Cincinnati: Queen City of the West, 1819–1838* (Columbus: Ohio State University Press, 1992), 89.
 - 7 John P. Foote, *Memoirs of the Life of Samuel P. Foote* (Cincinnati: Robert Clarke, 1860), 174–75; Lea, "Reprints and Reflections," 31.
 - 8 Charles Cist, *Sketches and Statistics of Cincinnati in 1851* (Cincinnati: William H. Moore & Co., 1851), 47; Tocqueville quoted in Aaron, *Cincinnati*, 318; *Cincinnati*

- Journal* (1834), quoted in Walter Stix Glazer, *Cincinnati in 1840: The Social and Functional Organization of an Urban Community during the Pre-Civil War Period* (Columbus: Ohio State University Press, 1999), 72.
- 9 *Niles' Weekly Register* 52 (1837), 69; Charles Mackay, *Life and Liberty in America: or, Sketches of a Tour in the United States and Canada, in 1857–8*, 2 vols. (London: Smith, Elder, & Co., 1859), 1:201; *Western Washingtonian and Sons of Temperance Record* (Cincinnati, OH), Oct. 31, 1845.
 - 10 Orin E. Newton, *Asiatic Cholera as It Appeared in Cincinnati, O., in the Years 1849, 1850, and 1866* (Cincinnati: American Eclectic Review, 1867), 10; Aaron, *Cincinnati*, 45; Marcus, *Plague of Strangers*, 55, 252n20.
 - 11 *Daily Cincinnati Gazette*, Jan. 9, 1849.
 - 12 J. P. Harrison, "Letter on the Sanitary Conditions of Cincinnati," *Transactions of the American Medical Association* 2 (1849), 619–21; *Cincinnati Daily Gazette*, Apr. 12, 1849; *Daily Atlas* (Cincinnati, OH), Jan. 1, 1849.
 - 13 *Liberty Hall and Cincinnati Gazette*, Mar. 30, 1849; *Cincinnati Daily Gazette*, Jan. 13, 1849.
 - 14 *Cincinnati Daily Gazette*, May 16, 1849.
 - 15 Ken Emerson, *Doo-Dah! Stephen Foster and the Rise of American Popular Culture* (New York: Simon & Schuster, 1998), 141; A. E. Gwynne to [Cettie M.] Gwynne, July 5, 1849, in Ruth C. Carter, "Cincinnati and Cholera: Attitudes toward the Epidemics of 1832 and 1849," *Queen City Heritage* 50 (Fall 1992), 43; Margaret Haines Lytle to Elias H. Haines, May 12, 1849, Lytle Papers, Cincinnati Historical Library, Cincinnati, Ohio.
 - 16 *Cincinnati Daily Gazette*, Jan. 9, 1849; Daniel Drake, *Natural and Statistical View; or, Picture of Cincinnati and the Miami Country* (Cincinnati: Looker & Wallace, 1815), 167.
 - 17 *Cincinnati Daily Gazette*, Jan. 9, 1849; Rosenberg, *Cholera Years*, 77–78; *Daily Atlas* (Cincinnati, OH), Jan. 5, 1849; Chambers, *Conquest of Cholera*, 221.
 - 18 Quoted in Glazer, *Cincinnati in 1840*, 93.
 - 19 Walter J. Daly, "The Black Cholera Comes to the Central Valley of America in the Nineteenth Century—1832, 1849, and Later," *Transactions of the American Clinical and Climatological Association* 119 (2008), 145; *Cincinnati Daily Gazette*, Aug. 8, Sept. 5, 1849. Eaton's population in the 1850 census was 1,346. The leading local Presbyterian minister claimed that foreigners accounted for 42 percent of all cholera fatalities, a fact he attributed squarely to their penchant for alcohol.
 - Joan E. Marshall, "Cholera in an Indiana Market Town: 'Boosters' and Public Health Policy in Lafayette, 1849," *Indiana Magazine of History* 98 (2002), 182–83, 199.
 - 20 *Cincinnati Daily Gazette*, June 29, 1849.
 - 21 The official cholera death toll for Cincinnati in 1849 was 5,969. David A. Tucker Jr., "Notes on Cholera in Southwestern Ohio," *Ohio Archeological and Historical Quarterly* 49 (October 1940), 383. New York City's Board of Health recorded 5,017 cholera victims in 1849, or about 1 percent of the city's population. In London during the same pandemic, around 15,000 people, or slightly more than 0.5 percent of the city's 2.5 million inhabitants died of the disease. Rosenberg, *Cholera Years*, 114; Philip Alcabes, *Dread: How Fear and Fantasy Have Fueled Epidemics from the Black Death to Avian Flu* (New York: Public Affairs, 2009), 65; Cist, *Sketches and Statistics*, 45.
 - 22 For more on Drake's animalcular theory, see Daniel Drake, "Systematic Treatise on the Principle Diseases of the Interior Valley of North America," (1850), reprinted in *Physician to the West: Selected Writings of Daniel Drake on Science and Society*, ed. Henry D. Shapiro and Zane L. Miller (Lexington: University Press of Kentucky, 1970), 373–79.
 - 23 S. A. Latta, *The Cholera in Cincinnati: or, A Connected View of the Controversy between the Homeopaths and the Methodist Expositor* (Cincinnati: Morgan & Overend, 1850), 3; Daniel Drake, "Speech to the Lower Mississippi Valley Society of Allopathic Physicians," n.d., quoted in "Calomel, Cholera, and Quacks: Interpreting Historical Evidence," ed. David del Mar, at Portland State University, College of Urban and Public Affairs Web site, accessed Dec. 3, 2015, http://www.upa.pdx.edu/IMS/currentprojects/TAHv3/TAH_Course/2011_Materials/Cholera_Calomel_Quacks.pdf.
 - 24 Latta, *Cholera in Cincinnati*, 38; *Cincinnati Daily Gazette*, May 25, 1849. For more on homeopathy in Cincinnati, see Kotar and Gessler, *Cholera*, 333–34.
 - 25 Thomas C. Carroll, "Observations on the Asiatic Cholera, as It Appeared in Cincinnati during the Years 1849 and 1850," *Western Lancet* 15 (June 1854), 325–27; Chambers, *Conquest of Cholera*, 223–24.
 - 26 *Cincinnati Daily Gazette*, June 7, 1849.
 - 27 *Louisville Journal*, Aug. 21, 1849, quoted in Gail E. Husch, *Something Coming: Apocalyptic Expectation and Mid-Nineteenth-Century American Painting* (Hanover, NH: University Press of New England, 2000), 126.
 - 28 Michael Allen, *Western Rivermen, 1763–1861: Ohio and Mississippi Boatmen and the Myth of the Alligator Horse* (Baton Rouge: Louisiana State University Press, 1990),

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- 186; *Cincinnati Commercial*, July 12, 1850; *Cincinnati Daily Gazette*, July 30, 1849.
- 29 “Tribute to the Late Prof. J. P. Harrison, of Cincinnati,” *American Journal of the Medical Sciences* 19 (Jan. 1850), 277; Kotar and Gessler, *Cholera*, 129; Rosenberg, *Cholera Years*, 70.
- 30 Lea, “Reprints and Reflections,” 30, 32.
- 31 Melosi, *Sanitary City*, 55–56. For more on Snow, see George Davey, “Commentary: Behind the Broad Street Pump: Aetiology, Epidemiology and Prevention of Cholera in Mid-Nineteenth-Century Britain,” *International Journal of Epidemiology* 31 (2002), 920–32.
- 32 Kotar and Gessler, *Cholera*, 169–70; “An Act to authorize the city of Cincinnati to enter upon and occupy a part of the Miami and Erie canal as a public highway, and for sewerage purposes” in J. R. Saylor ed., *The Statutes of the State of Ohio*, 4 vols. (Cincinnati: Robert Clarke & Co., 1876), 1:397; Chambers, *Conquest of Cholera*, 274.
- 33 Marcus, *Plague of Strangers*, 165–66; *Cincinnati Lancet and Observer* 8 (1865), 747; J. J. Quinn, *Cholera in Cincinnati in 1873* (Cincinnati: Gazette Steam Printing Establishment, 1874), 65–66; Chambers, *Conquest of Cholera*, 283. The focal point in 1866 was Newport Barracks, across the river in Kentucky. An unfortunate German woman accompanying a detachment of troops from New York allegedly introduced the disease, although the details are sketchy. From Cincinnati, federal troops served as unwitting reservoirs of contagion to the reconstruction South. Cholera followed them down to Georgia and Tennessee, where local death tolls were significantly higher than in Ohio but still below 1849 levels.
- 34 Chambers, *Conquest of Cholera*, 291–92; John M. Woodworth, *The Cholera Epidemic of 1873 in the United States* (Washington: U.S. Government Printing Office, 1875), 619; Quinn, *Cholera in Cincinnati*, 38, 69, 71.