

CHOLERA IN THE TIME OF GOLD: THE SACRAMENTO EPIDEMIC OF 1850

From the point of view of an animalcule of epidemic disease, a gold rush is as good as a war.

The term “cholera” has been applied in various combinations since Hippocrates to a set of symptoms presented by virulent gastro-enteric maladies. Some scholars thought the word was derived from *col h*, “chole,” the bile; a second derivation was supposed from *col ades*, “cholades,” the intestines; a third derivation, the interesting connotative transliteration *col era*, “cholera,” was suggested from eaves, or gutter.¹

Cholera Follows Man

In 1817 a massively lethal series of world cholera pandemics began.² Emanating from Bengal in eastern India to follow the tracks of armies and maritime traffic, the first pandemic afflicted a wide region of the southern Eurasian continent, circulating from China westward through Afghanistan to Arabia, into east Africa southward to Zanzibar, and touching Europe at the Caspian and Black Seas. At Mecca, already beset by the plague, cholera broke out in 1831 among pilgrims, killing perhaps half of them, estimated to be about 12,000 deaths. The pandemic reached Paris in the spring of 1832, “killing 18,000 people in a population of 785,000.”³ A second advance southwards through Persia and the Caucasus, probably arriving via Jidda on the Red Sea, “culminated in an epidemic killing more than 15,000 people at and near Mecca in November 1846.”⁴

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“It was probably not accidental that the onset of the first cholera pandemic fell within a period during which abnormal meteorological conditions prevailed,” observed modern cholera authority R. Pollitzer,

In India in particular, the year 1815 and still more that of 1817 had been marked by extremely heavy rainfalls followed by disastrous floods and harvest failures, while the year 1816 had been extraordinarily hot and dry. Whether propter hoc or post hoc, it is certain that in 1817 cholera began to show an unusual violence in India.⁵

In the Northern Hemisphere, the year 1816 was the year without a summer. The cause was the largest volcanic eruption in recorded history, when the Indonesian volcano Tambora exploded in April 1815. It is estimated Tambora's planetary cloud of ash and dust lowered global temperatures in some areas of the world by as much as 3 degrees or more Centigrade.⁶ The dangerous endemic cholera known for centuries along the Ganges, commonly referred to as *cholera nostras* in Bengal, may have been superseded when “a wholly new, much more contagious and virulent variant, also known as Asiatic cholera, sprang up in Jessore” in 1817.⁷ An 1885 historical study on cholera in India and the Indonesian archipelago connected the origin of the putative new strain of cholera with the abnormal conditions of 1815, “exceptionally cold, wet weather,” and 1816, “extreme drought,” with the assertion:

It is quite likely that the flooding of vast tracts of land, the great irregularity of the seasons, and the subsequent famine in Bengal, which in 1816 gave rise to epizootics and epidemics of known diseases in which numerous animal and human corpses remained unburied, are also to be regarded as the prime causes, through their combined action in 1817, of the origin of two new diseases in those regions, namely *cholera Asiatica* and the virulent form of *contagious pharyngitis*.⁸

To which one historian added in 1976, “There may have been some mutation in the cholera *vibrio* which enabled it to spread with greater speed and savagery, but more likely the cause was some change in the economic and social conditions of India.”⁹

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“The cholera epidemic also raised the question of what conditions favored the disease,” wrote French historian Francois Delaporte in 1986. “The *Report on the Progress and Effects of Cholera Morbus in Paris* (1834) clearly established that inequality with respect to death coincided with inequality with respect to life.” The report found an “urgent need for a new code of public health,” citing “neglect of traditional Hippocratic theories” to ask “how social factors might contribute to disease.” The aristocratic rebound from the French Revolution had produced a certain complacency in public affairs. Delaporte remarked that the observed mortality rate of only 2.3% was taken “as a justification of civilization.” He declared, “It is simply a fact that issues of public health and disease prevention were inextricably associated with issues of wealth, public order, and the survival of the poorest.” As he noted that “medicine failed utterly to stem the tide of cholera in 1832,” Delaporte offered an incisive comparison of capitalism and colonialism to explain why cholera killed who it killed when he observed “the working classes were to the privileged classes as India was to France.” As the world pandemic spread, carried by men at arms and men at sea, traders and travelers, it was clear that “the weaker and poorer the population, the more it is subject to disease.” The epidemic sorely challenged the early nineteenth century inclination “to confound medical progress with political progress.” Delaporte explained, “The progress of the disease seemed to contradict the idea that progress accompanies civilization.”¹⁰

To the empiricist generation of French and English physicians coming after the Napoleonic era, the social causes of epidemic disease were less mysterious than the scientific. “Contagion, before germ theory, was visualized as the direct passage of some chemical or physical influence from a sick person to a susceptible victim by contact or fomites or, for a relatively short distance, through the atmosphere,” public health expert C.-E.A. Winslow

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remarked. As dangerous as cholera was, there was abundant evidence that it was not passed by direct personal contact. Until “the concepts of long-distance transmission by water and food supplies and, above all, of human and animal carriers” replaced the theory of inanimate contagion, “the hypothesis of contagion simply would not work.”¹¹ But in the face of such a dire threat, quarantine, the authoritarian political reflex to centuries of plague and smallpox was frequently automatic and often irresistible.

“All physicians agreed that collective diseases were either contagious or infectious,” wrote Delaporte, who distinguished between contagion as direct person-to-person transmission, and infection, where transmission was mediated by an agent of infection bound to the source of infection. “The contrast between systems of contagion and infection was heightened by this dissimilar use of identical principles.” The difference between the two “was at once infinitesimal and irreconcilable.” The new empiricism did not exclude all possible modes of communicability except human to human; it engendered a deep medical conceptual continuity that sought the cause of infection in nature, the source of disease in humanity. There was a uniformity of process with a diversity of agents. The physician saw two social realities, the sheer numbers of an urban hospital and the sick child in the farmhouse down the road. As Delaporte put it, “city doctors saw infection whereas rural doctors saw contagion” because “the infection theory treated populations, whereas the contagion theory dealt with individuals.”¹²

Health officials facing the second pandemic in Europe, medical historian Erwin Ackerknecht observed, “were pragmatists insofar as their emphasis was no longer on a discussion of the scientific problem of contagion, but on exposing and removing those conditions whose elimination would prevent cholera, no matter what the rationale.”¹³ In the role it frequently played on the stage of the industrial revolution, “cholera became a compelling

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propagandist for urban betterment,” driving French and English public health reform in the 1840s through the work of Louis Rene Villerme, William Farr and Edwin Chadwick.¹⁴ “Far from attributing [the increased morbidity and mortality of 1848-49 as compared to 1831-32] to a relaxation of quarantines,” the 1850 *Report on the Epidemic Cholera of 1848 and 1849* by the British General Board of Health, “attributed it to the increase since 1831 of those conditions which it regarded as the causes of the disease and sources of the ‘miasma’: overcrowding, filth, dampness, faulty drainage, vicinity of graveyards, unwholesome water, and unwholesome food.”¹⁵ Pragmatic public health measures did gain support:

Their operations against ‘filth’ increased greatly their prestige. While it was difficult ... to prove that a respective epidemic would have been even worse without quarantines, health improvements after removal of ‘filth’ seemed to be causally related to the latter action.¹⁶

By Ackerknecht’s reckoning, political arguments tipped the scale of effective reaction to the wave of pandemics toward a social response:

Economic factors were consciously used by many to give a *causal explanation of epidemics* in our period [1821-1867]. This ‘sociological’ (as contrasted to biological) theory of epidemics can be found already in the 18th century under the influence of the enlightenment. Yet its spread is a feature of the 19th century.¹⁷

The irony did not escape Ackerknecht that “an eminently ‘progressive’ and ... sometimes very effective movement” was “based on a wrong scientific theory.”¹⁸

“One can clearly perceive the ominous role played in the propagation of the disease by military operations and by pilgrimages, when ample fuel became available” to spread cholera en route and at the journey’s end.¹⁹ The U.S. Treasury Department Supervising Surgeon’s 1875 report on the introduction of epidemic cholera summarized what was then known of the most deadly nineteenth century plague:

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The outbreaks of Asiatic cholera were founded on the arrival of the infection of the disease, either in the confined air or bilge-water of vessels, or in the persons and soiled clothing of those suffering either with the diarrhoeal or fully developed form of the complaint. It added to any or all the causes which produce similar disorders in the country to which it was brought, especially to filth, overcrowding, bad ventilation, miserable drainage, poor water, indigestible or soiled food, and bad habits of all kinds. Its march along the great traveled roads, kept time with the movements of travel and never outstepped them. It followed the lines of commerce, attaching itself to armies, and to caravans of pilgrims and merchants. It was never found outside the lines of travel and commerce, but always and everywhere commenced after the arrival of persons or things from previously affected places.²⁰

The confrontation of medical science with the uncertain cause and communicability of epidemic disease was a major challenge to the early nineteenth century American physician. The view of nature expressed in the writings of Alexander von Humboldt strongly influenced the interpretation of empirical observation in antebellum medicine, a kind of ecology before bacteriology often called medical topography. “The popular geography of health,” historian of science Conevery Bolton Valencius essayed, “was integrated with a cosmology of the body in which balance and management were governing principles.”²¹ Valencius found that the nineteenth century American concerned with health attempted to maintain a “delicate matrix of interaction” between the forces working on the human body and the natural world. Valencius quoted an 1843 review of the influence of climate on endemic disease in Doctor Daniel Drake’s *Western Journal of Medicine and Surgery*:

From the days of Hippocrates, the records of medical philosophy demonstrate that the phenomena of life ... that the moral, intellectual, and physical capacities of man are subject to the influence of those causes, the aggregate of which constitutes climate.²²

“With the same intensity,” as Valencius put it, “with which they scrutinized bowel movements or symptoms of fever, Americans of the early nineteenth century observed specific aspects of the natural world.” Since “both body and environment were in thrall to similar

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forces,” the “categorical differences between natural world and individual self” were “blurred.” In the context of the development of agriculture on the frontier, “cultivation *cured* wilderness.”²³

“The emigration to the West is a perennial stream,” Daniel Drake proclaimed in an important and widely disseminated 1834 lecture. “Civilization is a transforming power, and wherever its wand is raised, the surface of the earth assumes a new aspect.” The source of that transforming power lay in the “extended limits of the West” which “exert on the mind that expanding influence ... opening new sources of observation, and establishing fresh and profitable modes of intellectual communion.” Where “in old countries” the mind was “narrowed down,” in the West “the same person is compelled to do many different things” and “the restraints employed by an old social organization, do not exist.” Drake recognized that in transformation the pristine “teeming and beautiful landscape of nature fades away like a dream of poetry” to be replaced by the “useful but awkward creations of art.” Drake meant the practical art of settlers, farmers and the builders of cities.

Before 1848, agrarianism dominated the “vision of the future American Empire,” asserted medical historian J.B.DeC.M. Saunders, with “social and political theory guiding Western expansion.”²⁴ In California, the epidemic entry of the malaria parasite into one population set the stage for its subsequent endemicity in another. Major agricultural development was possible due to “the availability of land,” wrote Saunders, “especially in the vast alluvial valleys of the Sacramento and San Joaquin Rivers, owing to the loss of the Indian population by disease.”²⁵

Doctor J.D.B. Stillman professed the belief that the “topography of that part of California ... had a necessary influence upon the health of the immigrants” to favor just such therapeutic frontier development:

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The vegetation is too scanty to furnish the highly concentrated or putrid miasm of the tropic; but the whole valley contains ... the intermittent malaria, there can be no doubt; and that it will continue so until the greater part of its surface shall be renovated by the plough is my confident persuasion.²⁶

Atlantic commerce brought the first wave of cholera to the United States at New York City, Baltimore, and Philadelphia in 1832. In 1833 the disease made another entry by way of Havana into New Orleans. Coastal ports and inland market hubs linked by commercial turnpikes or navigable rivers and lakes were quickly infected. The first American visitation penetrated the interior of North America as far as Michigan, Kentucky, and Ohio. Arriving in 1848, the second American wave of cholera spanned the continent. By October 1850, cholera had come to Northern California.

Cholera reached California simultaneously by sea and land. The arrival at San Francisco of the dead and dying on ships from Panama and around the Horn was perhaps more precisely recorded, but the overland route to Sacramento was strewn with the corpses of pioneers and native people known and unknown. On April 21, 1849, a large body of California emigrants arrived at rendezvous to prepare for the journey across the plains. There had been a cholera death on board the steamer that delivered them to St. Joseph, Missouri, ironically named the *Sacramento*. "Other infected steamboats followed," the 1875 report stated,

On one of which, the *Mary*, over fifty deaths had occurred. By these emigrants cholera was carried westward over the Platte route, and being taken up by succeeding emigrants, the disease reached Sacramento in October, 1850, at almost the same time that it was brought into San Francisco by the steamer *Carolina* from Panama.²⁷

Argonaut Doctor J.D.B. Stillman wrote that "Asiatic cholera, which had made its appearance in the Atlantic seaboard early in the winter, began its ravages on the parties moving by the southern routes.... While encamped at the frontier towns, Independence and St. Joseph,

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the mortality was very great, and it followed the emigrants like wolves on the track of the buffalo: the camps were everywhere marked with hurriedly made graves.”²⁸

The surge in overland emigration injected cholera into the Plains Indian trade network. Investigators of the disease’s impact on horticultural and nomadic Native Americans from the Arkansas to the Platte Rivers during “the peak mortality period, 1849 to 1852” concluded that “virtually no tribe on the Plains escaped the 1849 epidemic.” James Mooney reported in 1898 that “The Kiowa say that half their number perished” during the scourge of cholera along the Arkansas River.²⁹ Farther north, at the Council Bluffs Agency, wolves fed on Pawnee corpses.³⁰ Of cholera among the Comanches in the summer of 1849, said T.R. Fehrenbach in 1974, “The raging pestilence of a single season wiped out at least the increase of a century on the meat-rich plains.”³¹ The life ways of plains people, clustering at communal water sources or at hunt processing sites, even the custom of visiting sick relatives, favored the spread of cholera. Dispersal, before infection, meant survival. When an Osage trading party brought cholera to a large inter-tribal 1849 Kiowa Sun Dance—known by native oral historians ever afterward as the “Big Cramps Dance”—Mooney recorded that the Kiowa survivors “saved themselves by scattering in different directions until the disease had spent its fury.”³²

As they assessed the factors that rendered the Plains Indians vulnerable to epidemic disease, historians Ramon Powers and James L. Leiker commented in 1998 that a modern “anthropologically-conscious definition sees *disease* as any disturbance to the finely adjusted internal balance that permits an organism to survive in a shifting environment.”

This definition is not far from the Humboldtian scientific perspective found in American medicine in 1850. The deadly confrontation with epidemic disease was the profoundest kind of

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empiricism. The relationship of man and nature was an intrinsic part of the Plains Indians' comprehension of the world. "Indians' own cosmological view of health and sickness resembled that of nineteenth-century whites in one crucial way," wrote Powers and Leiker. "Both saw disease as having a moral dimension, manifested power that lay outside the observable world and therefore was scientifically incomprehensible."³³

The Season of Death

Contrary to the powerful advertisements of early boosters, news from the forty-niners themselves painted a somewhat different picture of the salubrity of Gold Rush California. The *Edinburgh Medical and Surgical Journal* introduced J.D.B. Stillman's "Observations on the Medical Topography and Diseases (especially Diarrhoea) of the Sacramento Valley, California, during the years 1849, 1850" by noting that "all the newspapers have given statements, showing that the Valley of the Sacramento is a very unhealthy district, and has caused great mortality among those who have visited that region."³⁴

Doctor Stillman witnessed the "calamitous flood" of January 1850 that spread "death and destruction through the valley."³⁵ He described the extraordinary extent of the inundation of the Sacramento Valley that typically followed the winter rains. He and his colleague, Doctor John Frederick Morse, and all their patients were driven to the second floor of their Sacramento hospital at K and Third Street for days.

Doctor J.P. Leonard twice reported his observations of the same region in the same year to the *Boston Medical and Surgical Journal*. Leonard made the Panama passage by way of Chagres out of New Orleans, witnessing deaths during the isthmus crossing, reaching San

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Francisco in June 1849. He wrote his first report of June 30 before the season of autumnal fevers but noted that the “complaints most common in the mining districts are congestive, intermittent and remittent fevers, and disorders of the bowels.”³⁶ Leonard remarked on the distasteful salinity of the local well water. Stillman concurred that the water from wells was “highly impregnated with saline ingredients, and often offensive in taste and odour.” Stillman much preferred the snow melt water of the rivers, which was “remarkably sweet and pure.”³⁷

Leonard’s second letter, dated October 24, 1849, contained a clear clinical description of malaria, and he repeated himself to add rather more emphatically than in his first letter, “Remittent, intermittent and congestive fevers are common diseases, and are generally associated with dysentery or diarrhoea.” The living conditions of his patients in Sacramento drew Leonard’s special attention:

The same disastrous results have obtained here, as I have spoken of as sources of disease at San Francisco, and for the same reasons many cases have proved fatal. I have referred to want of means, care, etc., and to the dissolute and improvident habits and management of the patients themselves.... Patients who had good nursing, comfortable apartments and early treatment, generally speedily recovered.³⁸

Leonard wondered that “so many of the sick, ... men of dissolute habits, do recover under these circumstances” because he saw as many as five coroner’s inquests in a single day, “By far the greater number of burials are paid for from the public treasury.”³⁹

J.D.B. Stillman witnessed similar conditions in Sacramento. “A provisional government was organized,” he wrote, “but without resources it could do little more than furnish coffins.” Sacramento filled with thousands of wintering gold seekers. By the next spring, early 1850, Stillman “counted close on to one thousand graves in the vicinity of Sacramento, over which the grass had not yet grown.” Stillman elaborated on the course of the common malady,

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Imperfect digestion and irritability of the bowels was an early, constant, and almost universal affectation, and, from the habits of society, abundant facilities were afforded for observation.... This diarrhoea was so general during the fall and winter months ... that it has been popularly regarded as the disease of California.⁴⁰

Gold Rush newcomer Doctor Thomas M. Logan reported his clinical observation of “diarrhea ... *the disease of California*” to E.D. Fenner’s *Southern Medical Reports*, reprinted in *The New Orleans Medical and Surgical Journal* number of March, 1851:

In almost all cases there is tenderness on pressure over the large intestines, and sometimes over the left hypochondrium. In severe forms, the abdomen is often swelled, hot and painful to the touch, and the discharges are announced by searching pains.... In a great number of cases the disease, if not properly treated, runs on to a fatal termination so rapidly, that it may be considered as differing from dysentery only in degree.⁴¹

At the time, Logan mistook this presentation for “a typhoid form of fever.” With more time in country, he would recognize the enlarged spleen characteristic of malaria.

Doctor Stillman did not doubt this was evidence of a pathological relationship, “The great tendency to diarrhoea in convalescence from intermittent and remittent fevers is well known.” Stillman conceded that some gastro-enteric cases were possibly asymptomatic vis a vis autumnal fever, “Many cases of Californian diarrhoea were preceded by intermittents; and although many do not appear to have suffered in that way, still it must be admitted that all were much exposed to the intermittent malaria.”⁴²

The degraded health of many patients led to fatal outcomes, but Doctor Stillman retained faith in the healing powers of trained physicians, “Intermittent fevers were still very prevalent, but not fatal. Remittents were common, but I thought not necessarily fatal, with proper comforts and care.”⁴³ He placed less faith in the Sacramento Common Council to reimburse the proper care of the penniless. “Of those who are destitute, and who get well, we take their notes,” Stillman wrote after the flood, “if they die, we take a check on Heaven.”⁴⁴

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Not every forty-niner intended to grab his pile and head home. Some saw the new path to opportunity and prosperity that the far edge of the American frontier offered. Many California seekers meant to stay, to settle on the land. “There are some reasons why I should like to live in California, independently of its charming climate,” Doctor Stillman wrote in May 1850,

There is more intelligence and generous good feeling than in any country I ever saw. Men are valued for what they are. There are great rogues here, it is true; but there is a smaller proportion of mean and dishonorable men, and one feels that he has a standing here that it takes a man until he is old and rich to enjoy at home.⁴⁵

Settlers discovered their anticipation of government largesse, such as the free land grants received by settlers in Oregon and Washington, was not well founded. “The people who rushed to California,” wrote land grant historian Paul Gates, “took with them a view long held on the frontier that it was one the fundamental rights of Americans to enter upon the public lands, make improvements, create a farm, and eventually acquire ownership at a modest price.”⁴⁶ This view was obstructed by a maze of over 700 indeterminate, overlapping, “inchoate, incomplete, conditional, inexactly surveyed, and in some instances unlocated” Spanish and Mexican land grants guaranteed by the Treaty of Guadalupe Hidalgo. The California pioneer expectation was based on mining camp law, where “miners were required to work their claims to hold valid titles.”

The settlers in the neighborhood of the confluence of the American and Sacramento Rivers believed the ground “in and around Sacramento City” to be public land.⁴⁷ Speculators vied with settlers for possession and occupancy of city land. The settlers’ opponents always used the term “squatter” as one of opprobrium, but it seems the name stuck.⁴⁸ “The site of this city is claimed by General Sutter,” Stillman explained, “and city lots have been sold under his title ... in the meantime, the settlers take possession of unoccupied grounds, claiming that the grant did not

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cover the site of the city.”⁴⁹ Except for the commerce and business focused on the embarcadero, Sacramento lacked an urban center such as a central plaza or town square. The main artery, J Street, ran from the riverfront to Sutter’s Fort. The city of new wood buildings and the tent camps of transients overlapped, merging into clusters of city-dwellers, each a civic center to cater to basic needs for food, shelter, trade, and entertainment. The heated opposition of the mercantile entrepreneurs to the most active settlers polarized into extremes, the Law and Order Party and the Settlers’ Association.⁵⁰

The “Squatter question” in Sacramento boiled into agrarian warfare on August 14, 1850. A few days before, the squatter faction had claimed and fortified a vacant lot. On August 10, Stillman recorded, “Today the Sheriff, with a small party, surprised and took possession of their fortified place, with a garrison of five men and a twenty stand of shotguns.” Two squatters were arrested, charged with resisting the sheriff, and placed in the prison brig moored at the mouth of the American River. Without further incident, the sheriff quietly returned the disputed lot to its owner. The city’s Common Council had earlier prohibited as a misdemeanor, “imposing a heavy fine,” anyone but the City Surveyor to survey within the city limits. “This was regarded as a high-handed outrage upon individual rights,” Stillman concluded his diary entry, “and has done much to bring about the collision that is threatened.”⁵¹ The collision occurred round noon on August 14. About thirty armed squatters assembled at the scene of the earlier action for a good haranguing by their leader, a man named Maloney, then “proceeded down L street to the Levee ... toward the prison ship, a crowd of citizens gradually collecting behind them.”

Alerted, Mayor Hardin Bigelow mounted his horse and called upon the citizens along the area’s streets “to take up their arms for the defence [sic] of the laws of the city and of

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California.” Many responded to the mayor’s appeal, “rushed for their arms,” and gathered in numbers at the prison ship.

“The squatters,” Stillman wrote on August 16, “finding that the brig would be an ugly place to carry by assault, drew off and marched through town to the number of about fifty.” They were followed, reported the *Transcript*, “by a crowd of unarmed citizens, who were hooting and laughing at them.” The formation of squatters turned at Third and J streets to march out J. Stillman, standing at the corner of Second and J, encountered the mayor, and warned him that he was acquainted with some of these men, and knew that they would fire, “He said they would not, and rode on toward the crowd.” The *Transcript* recounted the “tremendous excitement”:

When on the corner of Fourth, Maloney, their captain, turned round, and seeing the Mayor, Sheriff, and several armed citizens after them, commanded his men to halt.

They drew up in line across Fourth Street, facing upon J; their leader was at their right. The Mayor and Sheriff rode up and commanded the Squatters to lay down their arms and deliver themselves up as prisoners. As the citizens were approaching, Maloney commanded his men to fire, and said distinctly in the hearing of a friend of ours, “Shoot the Mayor, shoot the Mayor.” The Squatters leveled their pieces and fired. Some of their guns were ... pointed several feet over the heads of the citizens, others were aimed lower and took more deadly effect. A general melee ensued, in which their [sic] was firing upon both sides. After the Squatters had fired their guns they drew their pistols. The citizens rushed upon them, and the Squatters broke and dispersed.⁵²

Stillman heard the volley and saw the melee, “The Mayor’s horse came flying back without a rider.”⁵³

The shooting was over. The mayor was shot in four places, one dangerously near the liver, not yet known if mortally. The City Assessor, J.M. Woodland, was shot dead. The squatter leader Maloney was hit three times, in the arm, the back, and, killing him instantly, the head. An Ohio man with a wife and family, named Morgan, was killed by a ball through the

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neck, and a third squatter, name unknown, was also killed. Doctor Charles Robinson, who Stillman identified as the political mastermind of the squatters, was slightly wounded and arrested. Three other persons, one a little girl, were also wounded.⁵⁴

Stillman later found himself in the Warbass Bank, makeshift headquarters of Law and Order men. “All were eager for the fray,” Stillman remarked of this Guard of the Law and Order Party, “I thought if they fought as well as they swore, the country would be safe.”⁵⁵

At the end of August 1850, J.D.B. Stillman confessed to his journal, “I am tired of excitement and long for the quiet of home. But to get home is almost as difficult as it was to get here.”⁵⁶

The only entry for September 1850 in his *Seeking the Golden Fleece* found Doctor Stillman in San Francisco. “The ravages of cholera are so serious on the Isthmus that I have resolved to go by way of Nicaragua,” he wrote tersely. “My baggage I put on board the schooner *Montague* to go around Cape Horn.” By this it appears Stillman meant his Gold Rush baggage would be loaded at Sacramento to travel aboard the *Montague* when it put in upriver. He was under the care of friends in Happy Valley, “I have had another attack of fever, followed by jaundice.”

The chronic disease of California may have masked the precise moment of the arrival by land of Asiatic cholera in Sacramento. Crossroads and port cities were vulnerable with every new traveler. Even though alerted to the imminent approach of cholera to England, when it appeared in Sunderland “it could not be ascertained how or even when this outbreak had originated.”⁵⁷

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Doctor Henry Gibbons recalled in 1866 that there was the “unmistakable evidence”—the general prevalence of diarrhoea—of the approach of cholera in California by late September and early October 1850. Although it was far more likely to have been evidence, as Stillman had described, of the sequel to a heavy season of estivo-autumnal malaria, Gibbons was not wrong about cholera. “About the first of October,” Gibbons wrote, “the steamer *Carolina* arrived from Panama with several cases on board, three of which died after landing.” Gibbons was fully aware of cholera’s California Caninae, “At the same time the newspapers reported the disease at Carson Valley, hundreds of miles in the interior, where it was said to have broken out among the overland immigrants.”⁵⁸

“It is generally conceded that the name *Cholera* is not to be applied till certain symptoms of a peculiar character exhibit themselves,” Doctor Gibbons explained, “the most characteristic of which is the profuse discharge from the bowels of a milky or flocculent fluid, resembling rice-water.” His articles for his own *Pacific Medical and Surgical Journal and Press* recapitulated the 1850 San Francisco epidemic and discussed diagnosis and treatment. “A similar fluid is also ejected from the stomach,” he wrote,

Cramps in the muscles of the legs and abdomen come on at the same time, or soon afterwards, and the patient sinks rapidly into the stage of collapse, which is marked by coldness of the surface, of the tongue and the breath, profuse perspiration, shriveled skin, the hands appearing as if they had been soaked in water, blueness of the surface from the stagnation of blood, a remarkably sunken countenance, and a husky feeble voice.⁵⁹

Without immediate medical attention the typical patient’s condition was “comparatively hopeless,” Gibbons confirmed. “In the sphere of my own observation, I can safely say that in nine out of every ten cases resulting fatally, death had set his seal on the patient before medical aid was obtained.”⁶⁰

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The Sacramento *Transcript* column one headline of Wednesday, October 9, 1850 hailed the Monday arrival of the *Carolina* at San Francisco with news of the California Bill in the House, and also with news of “twenty-two cases of cholera on board and thirteen deaths.” The report added, “The cholera had entirely disappeared from on board a few days prior to the steamer’s arrival at San Francisco. She was not quarantined.” Another *Transcript* item that day joyously announced “the almost miraculous recovery” of Hardin Bigelow. The “much esteemed Mayor ... has so far recovered from his severe wounds, that he was enabled to return to our city yesterday.”⁶¹

“Autumn in California is a very melancholy season,” Doctor Stillman, still in San Francisco, wrote on October 10, “it is the season of death.”⁶²

The *Transcript* of Thursday, October 17 noted under “Health of San Francisco.—The Cholera” that according to “the Medical Committee at the Bay ... the Cholera does not exist in that city to an extent to require any unusual measures to be taken by the public authorities. The committee recommend the cleansing and purifying of the streets.” The City Sexton recorded 24 deaths from diarrhoea and dysentery in the last three weeks and five deaths from cholera, including three from the *Carolina*, in same period.⁶³

“Every successive day brought intelligence from the Bay that the newly arrived passengers were still dying with cholera,” J.D.B. Stillman’s colleague Doctor John Frederick Morse wrote in his 1853 *First History of Sacramento City*. He recalled that the arrival of cholera in Sacramento came with the news of the admission of California to statehood. The *Transcript* reported admission on October 21, 1850. Morse recorded that both arrived on the same vessel, the steamer *New World*:

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Associated with the glorious intelligence of our admission into the great confederation of states was the sad assurance that a most malignant cholera was sweeping on towards California, and that the passengers on the very steamer that brought the news had many of them fallen victims to this terrific scourge.⁶⁴

Morse believed the first case in Sacramento to be a “steerage immigrant” from the *New World*. “We saw him at sunrise,” Morse remembered, giving the wrong date as October 20. He was found collapsed on the levee, beyond help. The *Transcript* corroborated Morse’s basic facts, reporting on Saturday, October 19, the coroner’s inquest on the body of a 21 year old man named John Bradbury from Newton, Jasper County, Illinois, who “died on the Levee yesterday morning at ten o’clock.” By using the phrase “the impression was,” it is perhaps too much to say the *Transcript* deliberately gave the wrong cause as “Cholera Morbus,” the quasi-medical vernacular for severe diarrhea, but Morse saw the dying man. “The cholera was now ... in our city, and from mouth to mouth the story was communicated ... to darken the city with the very pall of death in a few hours.” Morse was convinced terror was a significant factor in the epidemic’s virulence:

The next day several fatal cases were duly chronicled and as duly circulated through the magnifying minds of thousands of individuals whose fear of the disease made them the almost certain subjects of it. With such assistance any disease of common severity might have decimated the city, and hence it was not at all singular that cholera should have become a terrible destroyer.⁶⁵

Doctor Thomas Muldrup Logan, late of South Carolina by way of San Francisco and the diggings in the spring of 1850, wrote E.D. Fenner from Sacramento on October 29, “The first case I saw or heard of was brought to my hospital on the 18th October.” Logan described the clinical picture:

The patient was in that stage presenting severe gastro-enteric irritation; the tongue dry—skin cold and clammy, and pulse rapid, small, and irregular. In addition to these incontestable symptoms, the countenance was anxious, ghastly and shrunk—the voice feeble, and the ... extremities contracted with spasms.

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In consultation, Logan's associate Doctor Greenman concurred this was cholera. Logan quickly began treatment. He immediately administered large doses of "Sydenham's laudanum, sinapisms, and infusion of chamomile, flavored with a little Cologne water, for drink." Roughly translated, Logan applied a poultice, probably warm and moist, to the abdomen, relaxed the patient with an opiate, and hydrated him with spiked herbal tea. "Under this treatment our patient soon rallied," wrote Logan, "and in the course of twelve hours was comparatively well." The next case Logan was aware of, "reported by the city papers as the first case," occurred on October 19. "The patient was visited by Dr. Spalding, the city physician, who pronounced it cholera, and the man died in twenty-four hours from the time of his attack." In his letter, Logan detailed the alarming increase in cholera cases during the week following Spalding's case. Logan's verbal mannerisms, reminiscent of fellow Humboldtian Drake's verbosity, must have amused his more prosaic colleagues. Promising more information on the Sacramento epidemic "at some future date," he ended his October missive to Fenner, "I purpose reverting to the history of the cholera in California."⁶⁶

The Sacramento *Transcript* announced the admission of California to the United States on Monday, October 21, 1850. The editors buried a small item in a column far below: "Cholera in town.—Two or three cases of Cholera have appeared in town during the past two or three days."

On the evening of October 21, the Sacramento City Physician, Volney Spalding, stated to the Common Council that seven cases of cholera, with five deaths, had come to his notice. A Medical Society report recommended "a proper degree of caution in habits and eating." The *Transcript* of October 22 noted a difference of medical opinion in the matter. An individual pronounced to have cholera by the City Physician was diagnosed by their M.D. as having cholera

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morbus, and that if death ensued, it was for “want of proper care when the person was first taken ill.” The Common Council of Sacramento City was not so divided. Effective upon publication, it passed

AN ORDINANCE TO PROVIDE FOR THE SANITARY CONDITION OF THIS CITY.

The Council ordained: (1) all owners or occupants of property cleanse all filth or rubbish within twenty-four hours, under penalty of not over \$500; (2) after that time the City Physician remove all filth or rubbish, at the expense of the owners or occupants of the property; (3) such filth shall be removed to a place designated by the City Physician.⁶⁷

The evidence of the appearance of cholera upon the shores of California, wrote J.F. Morse, “created such a dread ... such an inexpressible fear ... of the malignant and hopeless rapidity with which it hurried its victims into eternity, that the people watched its manifestations with an excitability of mind that can seldom be induced by any scene of earth.”⁶⁸

On Thursday, October 24, 1850, The Sacramento *Transcript* gave column one notice to the exertions of citizens to render the city as clean as possible. The bonfires from Third to Eighth streets on J gave the appearance of a general conflagration. As seen from the levee, “the red glare, and volumes of thick smoke roiled off towards the south, while figures moving among the fires, collecting together material, seemed like anything but earthly beings.” Even as it printed the names and causes of twenty-six deaths in four days, sixteen of which were cholera, the paper promulgated bold complacency:

Considering the sanitary condition of our city, considering the habits of many of our citizens, who wantonly expose themselves, and indulge in every species of intemperance, we think our city is even now comparatively healthy, and that if our Physicians are correct in stating that the cholera is here, it has certainly made a very feeble beginning.

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The column two head line read, “Cholera on Board the *Montague*.” The newspaper reported that the schooner, which left Sacramento on the 18th, “arrived at San Francisco on the morning of the 22nd, with six of her passengers lying dead on board, all having died within twelve hours previous to her arrival, with the cholera.”⁶⁹

That Thursday Doctor J.D.B. Stillman set sail for home on the *Plymouth*. The *Plymouth* passed the *Montague*, lying at quarantine. Of her company of forty men out of New Haven, half had died. Of four Kanakas visiting her with the Health Officer’s boat yesterday, two were dead today. “Our ship passed rapidly through the Golden Gate,” Stillman wrote, “before night we lost sight of the land that had proved a grave to so many who but a year before had landed there, full of hope and daring.”⁷⁰

Advertisements for cholera nostrums began to appear in the newspapers. A *Transcript* testimonial to E.S. Billings’ “cholera mixture” was signed by Hardin Bigelow. Another medicine, “modified” from its application to dysentery and diarrhoea, stood “unrivalled” for the prevention and cure of cholera. At two dollars per bottle, the Boston Drug Store on J between First and Second warned, “No one should be without a bottle of it in his pocket, in case of any sudden attack.”⁷¹ Under the head “Cholera Specifics,” Doctor James Blake addressed the editors of the *Transcript* to caution the public against their use. “The experience I had [as] physician to the Cholera Hospital in St. Louis,” Blake wrote, “led me to the conclusion that the indiscriminate use of these cholera specifics is as fatal as the epidemic itself.” Stressing the risk of “the stimulating and inflammatory effects of these nostrums,” Blake advised “mustard poultices over the bowels” and recommended against eating salmon.

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The medical advice of readers was published in the newspaper. To the *Transcript*, Samuel McClure, M.D., respectfully forwarded the treatment recommended by Dr. Cartwright of New Orleans. Denying that diarrhoea was a premonitory symptom, but rather a result of the prior disease, Cartwright explained that the “pouring back process must be arrested.” Regarding most victims “trifling with the diarrhoea,” Cartwright offered an eerie observation, “What kills so many people with cholera, is, they will not believe they have the disease until they begin to die.”⁷²

On Saturday, October 26, the *Transcript* printed an extraordinarily learned “interesting communication ... from one of our first citizens” who signed himself “Ex-Medico”:

That this mysterious disease is now in our midst, and that the causes that give it potency are here, no one can doubt.... The slow progress of the disease should not lull us into fancied security.... Sometimes, like the sweeping flood, it bears all before it, and soon passes away ... it follows the great thoroughfares of travel; at other times it leaps whole kingdoms.... There are only *two* conditions ... that have had any evident effect in stopping its progress or lessening its fatality. They are, the extreme cold of winter; the other embraces those sanitary measures that make a city clean and the air pure, and that private hygiene that consists in regular habits, proper regimen, and a mind free from anxiety, or at ease.

“Ex-Medico” pressed his point, citing the city’s clean-up work and its hospital for the sick, “Now let the city provide a house under the direction of a judicious person, where persons, poor and infirm, may have dispensed food and clothing ... and you can save many valuable lives who would be the victims of cholera.” Before finally castigating nostrums as cures or preventatives, he earnestly added, “There should also be a place where the poor can get medicine at public cost.”⁷³

The following Tuesday the *Transcript* printed Doctor T.J. White’s “Remarks on the Cholera.” White, “with no ordinary anxiety,” urged every physician and philanthropist to “ameliorate our condition, and especially that of the destitute and indigent poor, and extenuate

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the consequences of this malignant scourge, which spares neither age, sex, or condition.” From his practice in the years 1832 through 1834, “and the summer of 1849, as it existed on the plains,” he stressed “the imperious necessity, and incalculable importance of arresting, and *at once*, without a moment’s delay, the invariable premonitory symptom, diarrhoea.” White reiterated the connection for his readers, most of whom were all too familiar with the California disease, “It is essentially part and parcel of the disease itself, and nature’s caveat, and must be speedily obviated, or the stage of intense suffering, collapse and death, must ensue in most instances.” In his experience, diarrhoea preceded every attack of cholera, and signaled the last moment for direct remedial means: “Beware! It is a disease of prevention in its incipient stage, not of cure in its advanced or collapsed condition.” White’s preventive measures fell into two categories. First, he commended his readers to “habits of temperance, both in eating and drinking.” Then, he insisted:

Every thing calculated to depress the mental and physical system, such as fear, grief and anxiety, and excessive fatigue and exposure of every description, but more especially to a cold, dreary night atmosphere, insalubrious and malarious emanations from certain filthy, low localities and ill ventilated places, must be scrupulously avoided ... occasional ablutions of the skin and rigid cleanliness should be resorted to.

Above his signature, White concluded, “For if there is a disease within the whole range of science to which the maxim ‘an ounce of prevention is worth a pound of cure,’ Asiatic or Epidemic Cholera is that disease.”⁷⁴

The next day, October 30, found the letter of John F. Morse at the top of column four, “Cholera—The Effects of Fright.” Morse had replied to a request from *Transcript* editors Ewer and Fitch concerning the case of Doctor George W. Noble. Noble was listed in that day’s “Mortality Report” from the record kept by undertaker J. W. Hansel; his name appeared in the

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column adjacent to Morse's item. Morse's account of what had transpired began with an odd opening scene:

On going to his room, I found him lying on a cot, so completely covered up as to make it impossible for a particle of fresh air to get to him. He had over him a thick quilt, I believe three heavy blankets, and hot bricks along his sides and around his extremities ... from his voice, which was muffled by this weight of bed-clothes, and the excitement with which he spoke, I was at once convinced that the man was more affected with fear than any ... symptoms of the disease which he supposed himself to have.

Morse continued his graphic narration,

He told me in a hurried manner, that he had for two days, whilst attending some cholera patients, taken morphine for the purpose of relieving himself from a liability to irritation about the bowels ... and he thought proper to make use of an enema. The enema operated in a short time, and ... he said he was taken with severe cramps and cold extremities, and that the discharge from the bowels was of a copious rice-water character.

In the hour before Morse and a fellow doctor, Weld, arrived, Noble had taken camphor and "hot brandy sling in large quantities," and was sweating as profusely as Morse had ever seen. With due medical diligence, Morse and Weld examined Noble's discharge (presumably in a chamber pot nearby). "To our surprise," penned Morse, they "found it almost of natural consistency, somewhat bilious, and no more fluid ... than what would inevitably result from the enema." Morse and Weld reassured Noble, begged him to be calm and careful with the stimulants, and promised to return in the morning.⁷⁵

"This morning we called, but found Dr. Noble a corpse," related Morse. "He had no other discharge from the bowels, and I could not ascertain that there was any vomiting." Here is where, declared Morse, "the main impulse to this disease originates." Where there was one case of cholera originating with foreign or remote causes, "I believe nine cases originate in the excessive anxiety and depressing fear which prevail in the community."⁷⁶ Whatever the cause, "George Knoble" is commemorated among the seventeen doctors who died in the epidemic.

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“I have seen men who ... have not drunk a glass of brandy and water for years, who are now swallowing it with a voracity that ... staggers an old toper,” Morse complained. “Others are carrying about them constantly, the various specifics, which are, I believe, doing more to spread the disorder, than the vilest malaria that ever committed aggressions upon the animal economy.” He closed with the hope that, contemplating this malady, “individuals will become more rational.”⁷⁷

On Saturday, November 2, a committee appointed by the Medico-Chirurgical Academy appealed to “the intelligence and humanity of the community” to ask, what is the duty of the public? A Grand Jury of citizens including Doctors White and Morse had a few days before reported to the Common Council that its ordinance against filth had been ineffective. As recorded by the city undertakers, E.S. Youmans and J.W. Hansel, in the *Transcript’s* “Mortality Report,” 149 men and eight women had died in the previous seven days, more than 22 deaths per day, with 99 deaths attributed to cholera, 21 to diarrhoea, and 19 more to dysentery and fever. In light of these facts, the Medico-Chirurgical committee ventured to offer suggestions, “believing if the public will see that they are properly carried out, the greatest and most desirable benefits would accrue from them.” First, the committee asked that each citizen devote “this day to a thorough cleansing of the streets, alleys, and back yards of the city.” To encourage “one day’s labor,” the committee claimed the best available statistics proved a reduction in relative mortality of 50% in favor of cleanliness, “One half of the lives now daily sacrificed may be saved by this means.” Second, the committee urged all persons to avoid the immediate causes of the disease, which they enumerated as “the neglect of a relaxed condition of the bowels,” poor ventilation and crowding especially during sleep, “keeping very late hours,” and “indulgence in taking stimulants.” They also suggested avoiding cabbage, radishes, beans, meat pies, raisins, fruit-

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cake, and salmon. The committee particularly recommended that persons “should not take the nostrums with which the community is already flooded.”⁷⁸

Beyond the effort to manage the filthy urban environment, assuage individual anxiety, and control the public’s fear, it is clear the serious physicians of Sacramento genuinely believed early medical attention was efficacious against the cholera outbreak. “Delay in taking advice,” the Medico-Chirurgical committee concluded, “is the certain ruin of many who die with this malady.” The entire committee signed their emergency broadcast: T.J. White, J.F. Morse, G.W. Deal, J.R. Riggs, R.A. Pearis, J. Blake.⁷⁹

As death notices of the high and the humble continued to stack up its columns, the *Transcript* editorialized throughout the first week of November in favor of a Board of Health. On Saturday, November 2, because “too many duties are at present devolving upon a few individuals,” the paper modestly proposed a board of two physicians and one citizen. On Monday the editors pointed to the shortfall in sanitary improvement and noted the weekend effort of the Medico-Chirurgical committee to induce the Common Council to act, “The evening came, but a quorum of the Council could not be got together.... We trust there will be no further postponement.” As it surveyed the need for a Board of Health, most importantly to install a decisive authority to act during the emergency, the *Transcript* remarked, “Our city just at this time, is strangely deficient in the number of her officers.” On Tuesday, the *Transcript* once again reported no quorum present at the Council to receive the recommendation of the committee of the Medico-Chirurgical Society to establish a Board of Health. The next day an item named the board nominees to be T.J. White, J.R. Riggs, and James Blake. The November 5 editorial revealed the focus of the *Transcript*’s—and doubtless the Medico-Chirurgical Society’s—dissatisfaction, Volney Spalding, the City Physician, who also sat on the Common Council:

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We earnestly hope that the sanitary condition of our large and growing city will no longer be entrusted to the hands of one man, whose other duties, public as well as private, must necessarily put it out of his power to devote that attention to the health of our city which the lives of the many citizens demand.

Appended to the “Mortality Report” for November 3 and 4, the *Transcript* noted with no fanfare “a decided falling off in the number of deaths by cholera yesterday,” adding they had learned the number of new cases was “comparatively small.” The trend in declining mortality, and entrenched support on the Council for fellow member Spalding, ultimately killed the proposed Board of Health ten days later.⁸⁰

Death marched on in Sacramento City. Yet another “Coroner’s Inquest” on Friday, November 8 told the sad tale of so many. Lawrence Wolfe, a Galena, Illinois man of 23 years was found dead in a wagon standing at the corner of I and Fourteenth street. “It appeared that he had been suffering from diarrhoea for three or four days past, during which time he had lain in the wagon, without attendance or medical aid.” The coroner called it “death from Diarrhoea.”⁸¹

The *Transcript* reprinted an *Alta California* report of “Sickness at Mission Dolores,” where two Indians had died of cholera, on November 7. The same issue ran a *Herald* report of “great panic among the Mexicans” caused by the approach of cholera to San Jose.⁸² George Lyman wrote in 1925 that from the San Francisco harbor “the epidemic spread rapidly down the beautiful Santa Clara Valley.”⁸³ Henry Gibbons presented a picture of the social as well as the medical situation on the San Francisco peninsula, “Early in November the cholera made its appearance in San Jose ... but without severity, its operations being confined mainly to the Mexican and native population in the suburbs.”⁸⁴ In those suburbs, one of California’s earliest physicians “did everything within his power to minister to his neighbors and to stay the scourge.”

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Cholera swept away Yerba Buena's Doctor John Townsend and his wife, leaving only their young son, John H.M. Townsend.⁸⁵

Finally the storm broke in the *Transcript* on Friday, November 15, 1850: "The Last of the Cholera.—The mortality reports for the last three or four days show the most gratifying improvement in the health of the city ... cholera ... has almost if not entirely passed from among us." This week's daily body count had decreased from eight to two. The next day, calling at the undertaker's office to get "the usual list of deaths," the *Transcript* editor found Mr. Youmans' employees "looking disconsolate," for they realized it was "the close of *their* business season."⁸⁶

Two weeks after the scourge receded from Sacramento, the final blow fell. Hardin Bigelow, the mayor whose "success ... decided the question of the permanence of our then infant city," died of cholera at the Union Hotel in San Francisco "after an illness of some fifteen or sixteen hours."⁸⁷

The Awful Soul of Cholera

Thomas Muldrup Logan reverted to his purpose in a November 1850 letter to E.D. Fenner's *Southern Medical Reports*. "Preceding and accompanying the appearance of cholera," Logan evoked the California disease, "influenza and bowel affections ... particularly blended and alternated with cholera, as well as remittent and autumnal intermittents, prevail to a greater or less extent."⁸⁸ Turning his attention to the mortality of cholera, "this cosmopolitan disease," he gave the number of "364 victims, out of a population of 6000," roughly 6%, which he called unprecedented. "Even at Paris, in 1832, when I first encountered the disease," Logan reckoned, "the mortality was regarded as excessive—amounting to 18,000 out of a population 800,000, the

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proportionate number of deaths was not so great, by more than one-half.” Logan had studied in Paris when Alexander von Humboldt, residing in the city as a diplomat, reached the height of his fame and scientific influence. J.B.deC.M. Saunders facetiously observed that the world cholera pandemic followed Logan to California.⁸⁹ Logan acknowledged his Sacramento number was “a most modest calculation, based solely upon the mortuary record of the two principal coffin-makers and undertakers.” He knew there were many more deaths, “Doubtless many others were interred by friends of the deceased ... for I know by experience that there was a greater demand ... than the undertakers could comply with.” The *Transcript* confirmed that Youmans, the city undertaker, had even been obliged to turn away “scores of ‘good customers.’”⁹⁰ Logan quoted the *Transcript* report of November 19 that “a friend who has taken the pains to count the graves in the two cemeteries”—here Logan added “of this two-year-old city”—“makes the number 1170, of which 700 were made during the late epidemic.”⁹¹ Sacramento medical historian Irma West, M.D. noted that a recent City Cemetery record compiled by Bettencourt and Mills listed over 900 cholera victims in the 1850 outbreak.⁹² This number of cholera deaths, with Logan’s value for the Sacramento population, yields a mortality of 15%.

To unlock the significance of these numbers, I surveyed the Sacramento *Transcript* “Mortality Report” from October 20, 1850 to November 14, 1850. My survey found 456 deaths listed, including 27 women, 11 “colored,” and 9 doctors. Cholera was given for 321 causes, with 49 diarrhea, 15 dysentery, 19 fever, 30 unknown or cause not given, leaving 22 deaths from all other causes, including tuberculosis, typhoid fever, homicide, etc., summarized by Chart 1. Assuming all sources are in a reasonable neighborhood of the truth, this body count appears to be a bit more than half the grave count, thus the statistics of the *Transcript’s* mortality reports are likely to be a good rough cut demographic sample of who died. As Logan mentioned, the

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Transcript of November 16 reported the 1850 U.S. Census. Taken early in the epidemic period, the census conducted by assistant marshal William N. Johnson listed “inhabitants near 6000.” Johnson reported many houses south of K street were vacated within days of the cholera break out. He guessed that “Sacramento City has a *floating population* (which is impossible to get) of about 2000 persons.”⁹³ My survey, confined to *Transcript* “Mortality Report” data only, therefore finds an overall death rate during the epidemic of 7.6%, still three times higher than Paris in 1832.

Deaths by age group are particularly poignant. As shown by Chart 2, nearly 40% of the Sacramento dead whose ages were known were in their twenties. Deaths by original residence of the victim in Chart 3 are at some variance with Doris Marion Wright’s 1940 analysis of California immigration, especially for the South.⁹⁴ Wright’s proportions of southerners and westerners in the 1850 California population were 26% and 36% respectively.

Chart 4 presents the mortality by day in English cholera pioneer John Snow’s Table 1, which depicted the progress of the Broad Street pump cholera infection in London and established the premise of Snow’s theory of cholera transmission by a contaminated water source.⁹⁵ I take Chart 4 as a control to show the course of cholera infection from a single source.

Chart 5 illustrates the course of the Sacramento epidemic in deaths per day from all causes, from cholera, and from the complex of maladies, including unknown, constituting the California disease. Of great interest in Chart 5 is the evidence for multiple local sources of infection over time suggested by the multiple peaks. The reservoir of cholera in Sacramento may have shifted geographically as the immediate source of infection struck every susceptible person in its vicinity, producing a series of lethal cholera clusters.

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“In a few days many of our most substantial citizens were numbered among the victims of the sweeping epidemic,” John Frederick Morse wrote in his *First History of Sacramento City*. The terrible virulence of cholera dislodged medical notions of social responsibility founded on moral economy. “The victims of the malady did not seem to be confined so much to those of intemperate and irregular habits as had been the case in almost all the previous manifestations of the disease,” wondered Morse. “People of the most industrious, regular, and careful habits seemed alike vulnerable to the dreadful enemy.” Newspapers like the *Transcript* had put on a bold face of normalcy while reporting catastrophic losses to illness. Morse described the human reaction to the remorseless advance:

As soon ... as the daily mortality became so great as to keep men constantly employed in carrying away the dead, the citizens began to leave town in every direction and in such numbers as to soon diminish the population to probably not more than one-fifth of its ordinary standard. In this pestilential reign of terror and dismay the most dreadful abandonments of relatives and friends took place.

Even among these horrors, “Not a single educated physician turned his back upon the city in its distress,” Morse bore witness,

There were a few men, as there will always be, whose warm hearts throbbed with an uncontrollable anxiety to convey relief to the distressed and dying, men who lingered around the death scenes of the epidemic so spellbound by sympathy that they endured anything and everything as long as there remained a solitary hope of even palliating the agony of dissolving nature.

Morse called such human spirit “the only real divinity of man during this terrible slaughter scene of 1850.”⁹⁶

Against therapeutic frustrations, American antebellum medicine sought and found other remedies for epidemic disease. If therapeutic medicine had yet to conclusively prove its worth over alternative curative practices for the patient, an empirically reinforced social medicine could nourish the physicians of Sacramento at their moment of crisis, to lift their nineteenth century

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medical reality—before germ theory—toward public health, personal hygiene, and professionalism.

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June 2011

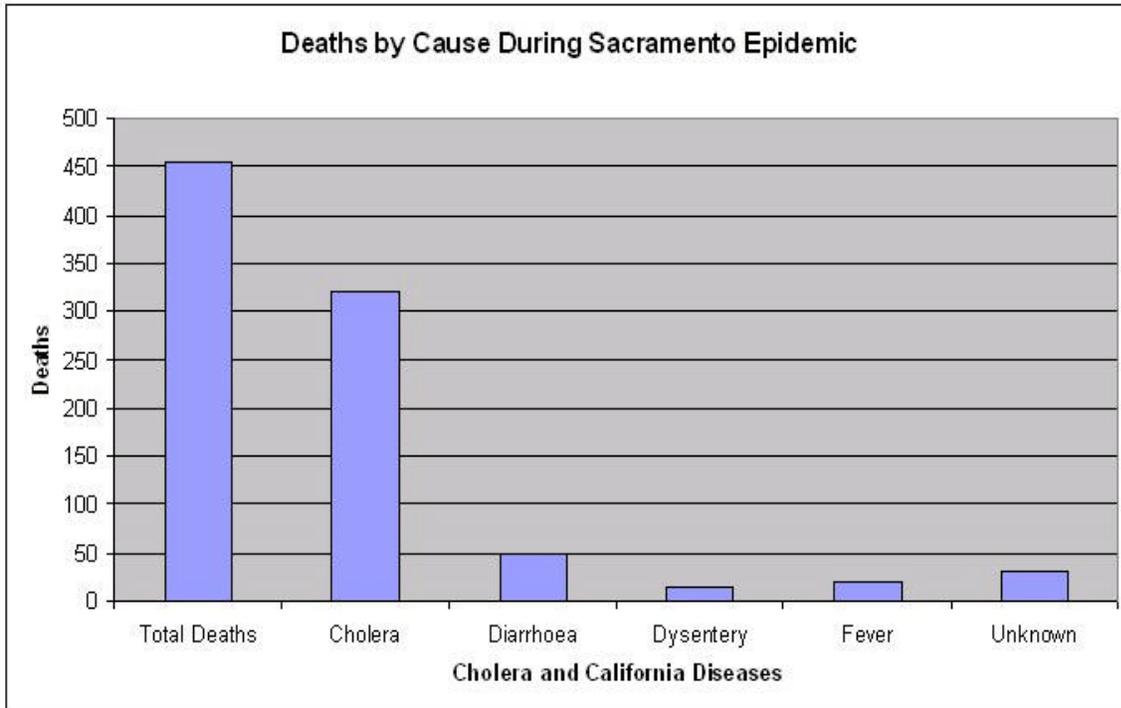


Chart 1. Deaths by Cause in Sacramento Epidemic October 20 to November 14, 1850.

Source: Sacramento *Transcript*, "Mortality Reports," October and November 1850 issues.

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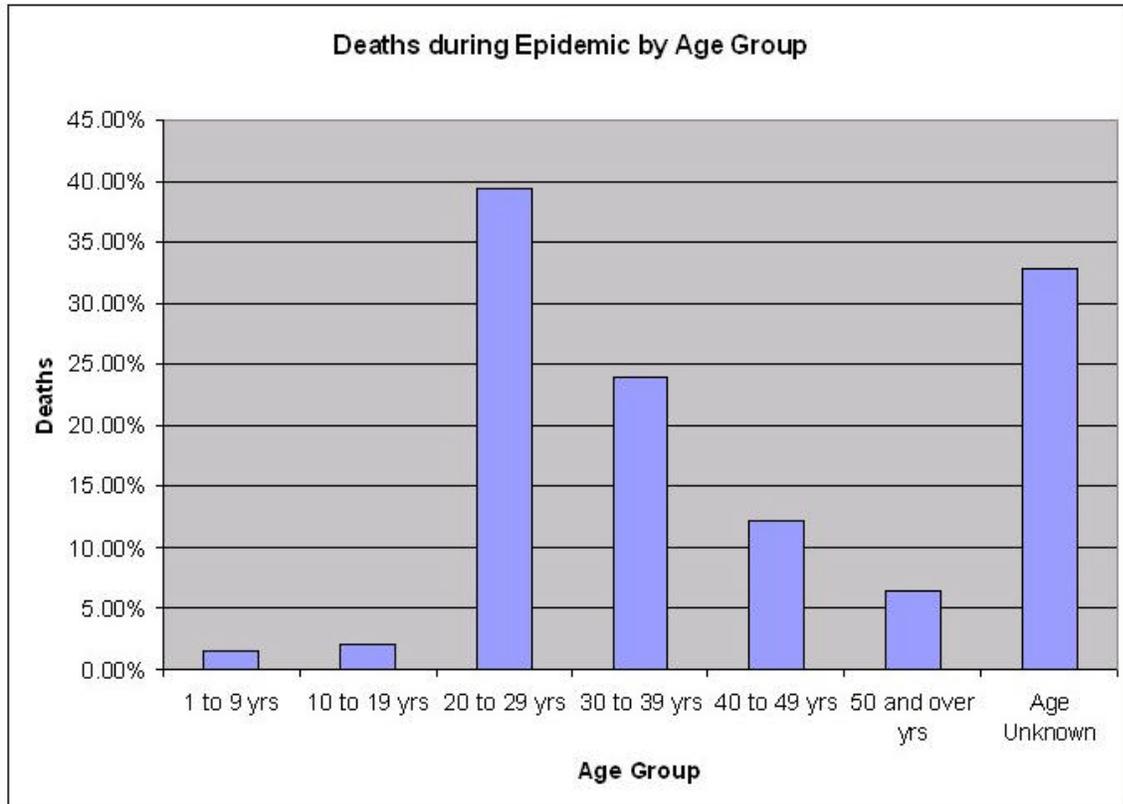


Chart 2. Deaths by Age Group in Sacramento Epidemic October 20 to November 14, 1850.

Source: Sacramento *Transcript*, "Mortality Reports," October and November 1850 issues.

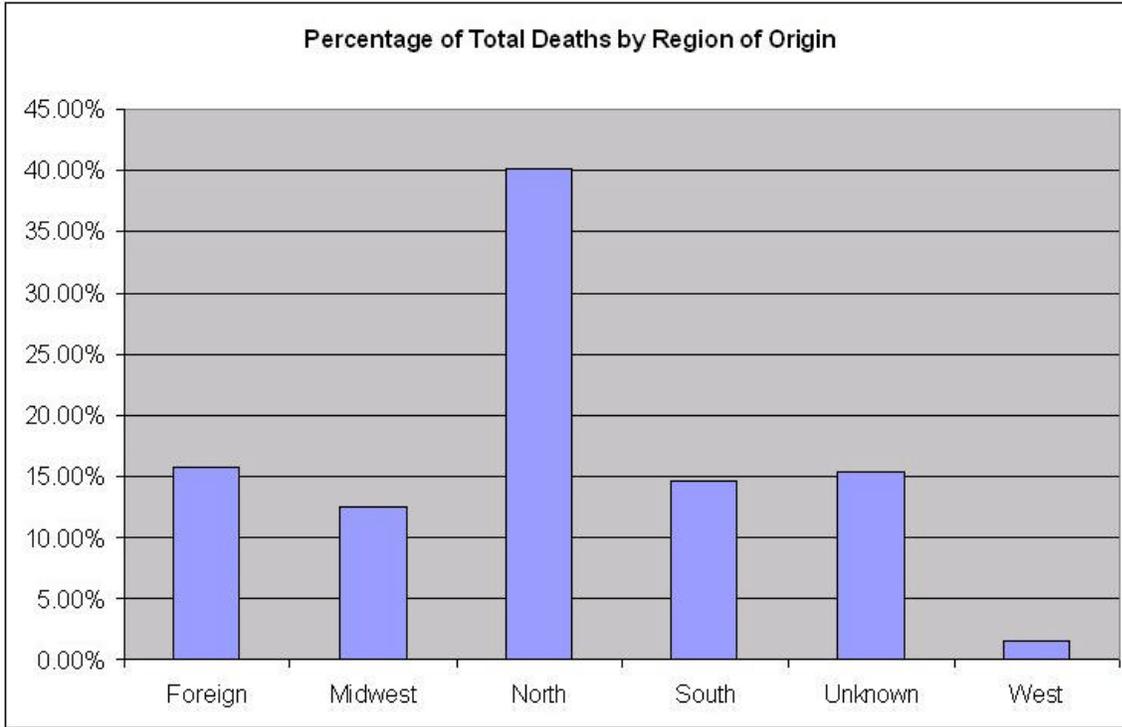


Chart 3. Deaths by Origin of Victim in Sacramento Epidemic October 20 to November 14, 1850.

Source: Sacramento *Transcript*, "Mortality Reports," October and November 1850 issues.

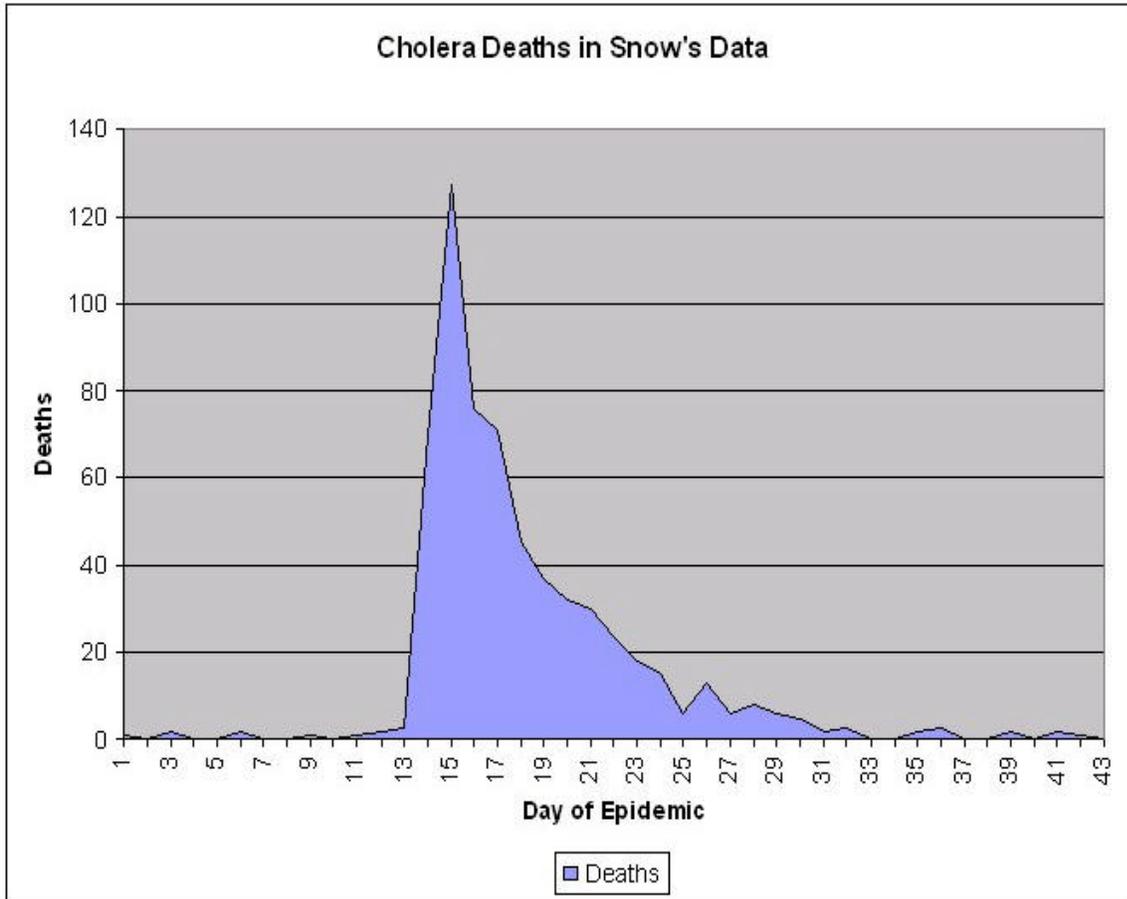


Chart 4. Deaths in John Snow's Table 1.

Evident single source of infection was the Broad Street pump.

Source: John Snow, M.D., *On the Mode of Communication of Cholera*.

Cholera, Diarrhoea, Dysentery, Fever, and Unknown

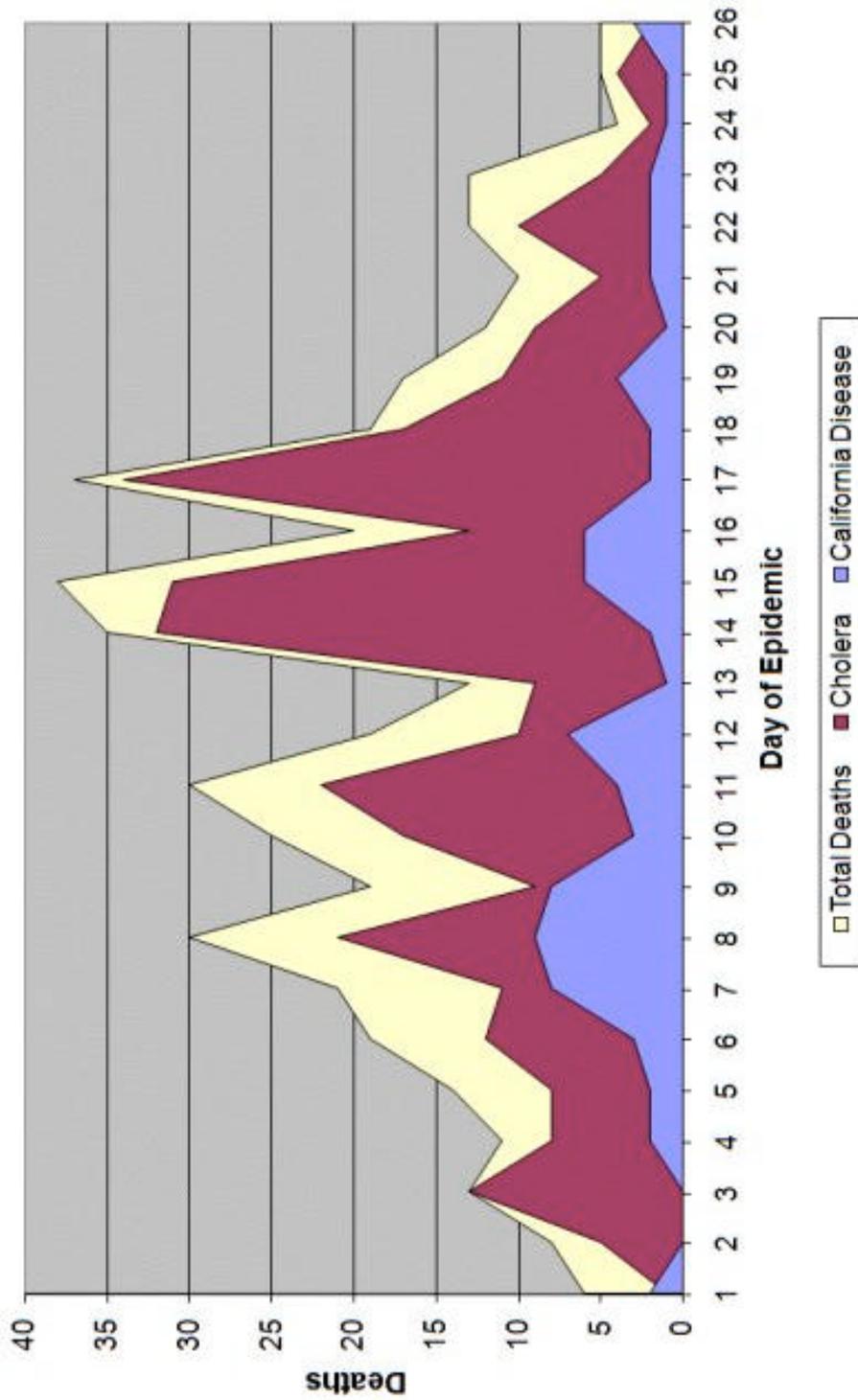


Chart 5. Course of Sacramento Epidemic October 20 to November 14, 1850.

Multiple peaks suggest successive loci of infection.

Source: Sacramento Transcript, "Mortality Reports," October and November 1850 issues.

¹ R. Pollitzer, "Cholera Studies: 1. History of the Disease," *Bulletin of the World Health Organization*, Vol. 10, 1954, 424, note 1.

² *Ibid.*, 427-440.

³ Francois Delaporte, *Disease and Civilization, The Cholera in Paris, 1832*, trans. Arthur Goldhammer, (Cambridge: MIT Press, 1986), 5.

⁴ Pollitzer, *op. cit.*, 435, 438.

⁵ Pollitzer, *op. cit.*, 428.

⁶ USGS on Tambora, vulcan.wr.usgs.gov/Volcanoes/Indonesia/description_tambora_1815_eruption.html. See also Richard B. Stothers, "The Great Tambora Eruption in 1815 and its Aftermath," *Science*, New Series, Vol. 224, No. 4654 (Jun. 15, 1984), 1191-1198.

⁷ Bernice de Jong Boers, "Mount Tambora in 1815: A Volcanic Eruption in Indonesia and Its Aftermath," *Indonesia*, Vol. 60 (Oct., 1995), 54.

⁸ *Ibid.*, 54-55, translating and quoting J. Semmelink, *Geschiedenis der cholera in Oost-Indie voor 1817* (Utrecht, 1885).

⁹ *Ibid.*, 54, quoting R.J. Morris, *Cholera 1832, The Social Response to an Epidemic* (London: Croom Helm, 1976).

¹⁰ Delaporte, *op. cit.*, 198, 11, 13, 10, 12, 97, 145, 98.

¹¹ Erwin H. Ackerknecht, "The Fielding H. Garrison Lecture: Anticontagionism Between 1821 and 1867," *Bulletin of the History of Medicine*, Vol. XXII, 1948, (Baltimore: The Johns Hopkins Press, 1948), 566. Ackerknecht quotes Winslow from C.-E.A. Winslow, *The Conquest of Epidemic Disease*, (Princeton: Princeton University Press, 1943), 182.

¹² Delaporte, *op. cit.*, 164, 169.

¹³ Ackerknecht, *op. cit.*, 579.

¹⁴ Ian Morley, "City Chaos, Contagion, Chadwick, and Social Justice." *Yale Journal Of Biology And Medicine*, 80 (2007), 65, 67.

¹⁵ Ackerknecht, *op. cit.*, 579.

¹⁶ *Ibid.*, 587.

¹⁷ Ibid., 591, 592.

¹⁸ Ibid., 593.

¹⁹ R. Pollitzer, op. cit., 426-427, 439.

²⁰ John M. Woodworth, *The Cholera Epidemic of 1873 in the United States, The Introduction of Epidemic Cholera through the Agency of the Mercantile Marine: Suggestions of Measures of Prevention*, (Washington: Government Printing Office, 1875), 601. Some passages are parsed and paraphrased for the modern ear.

²¹ Conevery Bolton Valencius, “The Geography of Health and the Making of the American West: Arkansas and Missouri, 1800-1860,” Chapter 7 of *Medical Geography in Historical Perspective (Medical History, Supplement No. 20)*. Edited By Nicolaas A Rupke, (London: The Wellcome Trust Centre for the History of Medicine at UCL, 2000), 127.

²² Ibid., 130, 144. The author of the review, as was customary in medical journals of the time, was named by his initials, “C.C.” I believe this was Charles Caldwell, mentioned by Otto Juettner in *Drake and His Followers*, “famous as an author,” and “a distinguished member of the medical faculty in Transylvania University, Lexington, Ky.” Otto Juettner, *Daniel Drake and His Followers*, (Cincinnati: Harvey Publishing Company, 1909), 204, 46.

²³ Valencius, op. cit., 130, 144, 143. Italics in the original.

²⁴ J.B.DeC. M. Saunders, “‘The Fielding H. Garrison Lecture’: Geography and Geopolitics in California Medicine,” *Bulletin of the History of Medicine*, 41:4 (July/Aug. 1967), 312.

²⁵ Saunders, op. cit., 317.

²⁶ J.D.B. Stillman, “Observations on the Medical Topography and Diseases (especially Diarrhoea) of the Sacramento Valley, California, during the years 1849, 1850,” *The Edinburgh Medical and Surgical Journal*, Vol. 78. (Edinburgh: Adam and Charles Black, 1852), 281-282.

²⁷ Ibid., 617.

²⁸ J.D.B. Stillman, *Seeking the Golden Fleece: A Record of Pioneer Life in California*, (San Francisco: A. Roman and Company, 1877; reprint, LaVergne, Tennessee: Kessinger Publications, 2010), 27-28.

²⁹ Ramon Powers and James L. Leiker, “Cholera among the Plains Indians: Perceptions, Causes, Consequences,” *The Western Historical Quarterly*, Vol. 29, No. 3 (Autumn, 1998), 331, 321. Mooney’s quotes throughout are taken from James Mooney, “Calendar History of the Kiowa Indians,” *Seventeenth Annual Report, Bureau of American Ethnology*, Washington, DC, 1898.

³⁰ Powers and Leiker, op. cit., 321, 323.

³¹ T.R. Fehrenbach, *Comanches: The Destruction of a People*, (New York: Knopf, 1974; New York, Da Capo Press, 1994), 390.

³² Powers and Leiker, op. cit., 333.

³³ Ibid., 336, 328.

³⁴ Stillman, "Observations", 275.

³⁵ Stillman, *Seeking the Golden Fleece*, 146-156.

³⁶ Robert T. Legge and J.P. Leonard, "Medical Observations of J.P. Leonard, M.D.," *California Historical Society Quarterly*, Vol. 29, No. 3 (Sep., 1950), 213.

³⁷ Stillman, "Observations," 278; Legge and Leonard, op. cit., 212.

³⁸ Legge and Leonard, op. cit., 214.

³⁹ Ibid., 213-214.

⁴⁰ Stillman, "Observations," 283-284. It is important to note that Stillman here referred to the mortality of the "disease of California" in the winter of 1849-1850. Cholera was not yet among them.

⁴¹ Thomas M. Logan, "Letters from California,--Its Climate—Prevalent Diseases—State of the Medical Profession—Introduction of Cholera, etc.," *The New Orleans Medical and Surgical Journal*, March, 1851, (New Orleans: Weld and Co., 1851), 565-566. Fenner was Logan's brother-in-law. See J. Roy Jones, *Memories, Men and Medicine, A History of Medicine in Sacramento, California*, (Sacramento: The Sacramento Society for Medical Improvement, 1950), 2.

⁴² Stillman, "Observations," 288.

⁴³ Ibid., 288, 283.

⁴⁴ Stillman, *Seeking the Golden Fleece*, 156.

⁴⁵ Ibid., 164-165.

⁴⁶ Paul W. Gates, "Adjudication of Spanish-Mexican Land Claims in California," *The Huntington Library Quarterly*, Vol. 21, No. 3 (May, 1958), 216.

⁴⁷ Mark A. Eifler, "Taming the Wilderness Within: Order and Opportunity in Gold Rush Sacramento, 1849-1850," *California History*, Vol. 79, No. 4 (Winter, 2000/2001), 202, 200. Eifler quotes a broadside of the Settlers' Association.

⁴⁸ Paul W. Gates, "California's Embattled Settlers," *California Historical Society Quarterly*, Vol. 41, No. 2 (Jun., 1962), 108.

⁴⁹ Stillman, *Seeking the Golden Fleece*, 170-171.

⁵⁰ Eifler, op. cit., 197-198.

⁵¹ *Transcript* (Sacramento), 15 August, 1850; Royce, op. cit., 242; Stillman, *Seeking the Golden Fleece*, 171. The chronologies of these three sources are not precisely synchronous.

⁵² *Transcript* (Sacramento), 15 August, 1850.

⁵³ Stillman, *Seeking the Golden Fleece*, 172.

⁵⁴ *Transcript* (Sacramento), 15 August, 1850.

⁵⁵ Stillman, *Seeking the Golden Fleece*, 178, 179.

⁵⁶ Stillman, *Ibid.*

⁵⁷ Pollitzer, op. cit., 433.

⁵⁸ Henry Gibbons, "Malignant Cholera in California," *The Pacific Medical and Surgical Journal and Press*, Vol. VIII, October, 1865, (San Francisco: Thompson, Mahon and Company, 1866), 193-194.

⁵⁹ Henry Gibbons, "Hygiene of Cholera," *The Pacific Medical and Surgical Journal and Press*, Vol. VIII, October, 1865, (San Francisco: Thompson, Mahon and Company, 1866), 300.

⁶⁰ Gibbons, "Hygiene of Cholera," 301.

⁶¹ *Transcript* (Sacramento), 9 October, 1850. The layout of the Transcript, in four or six sheets, nearly always placed the news and comment of the day on page two, in five columns. The rest of the paper contained announcements, shipping schedules, advertising, etc.

⁶² Stillman, *Seeking the Golden Fleece*, 180-181.

⁶³ *Transcript* (Sacramento), 17 October, 1850.

⁶⁴ John F. Morse, *The First History of Sacramento City*, (Sacramento: Sacramento Book Collectors Club, 1945), 89-90.

- ⁶⁵ *Ibid.*, 90-91; *Transcript* (Sacramento), 19 October, 1850.
- ⁶⁶ Thomas M. Logan, *op. cit.*, 567-568.
- ⁶⁷ *Transcript* (Sacramento), 22, 26 October, 1850.
- ⁶⁸ Morse, *op. cit.*, 90.
- ⁶⁹ *Transcript* (Sacramento), 24 October, 1850.
- ⁷⁰ Stillman, *Seeking the Golden Fleece*, 183. Kanaka meant Hawaiian or Pacific Islander.
- ⁷¹ *Transcript* (Sacramento), 24, 28 October, 1850.
- ⁷² *Transcript* (Sacramento), 25 October, 1850.
- ⁷³ *Transcript* (Sacramento), 26 October, 1850. I conjecture that “Ex-Medico” was San Francisco physician and California booster Victor Fourceaud, who had business interests in the Sacramento Valley. *In Memoriam: Victor Fourceaud*, (San Francisco: Society of California Pioneers, 1875). Special Collections, Bancroft Library, University of California.
- ⁷⁴ *Transcript* (Sacramento), 29 October, 1850.
- ⁷⁵ *Transcript* (Sacramento), 30 October, 1850.
- ⁷⁶ *Transcript* (Sacramento), 30 October, 1850.
- ⁷⁷ *Transcript* (Sacramento), 30 October, 1850.
- ⁷⁸ *Transcript* (Sacramento), 2 November, 1850.
- ⁷⁹ *Transcript* (Sacramento), 2 November, 1850.
- ⁸⁰ J. Roy Jones, *Memories, Men and Medicine, A History of Medicine in Sacramento, California*, (Sacramento: The Sacramento Society for Medical Improvement, 1950), 246; *Transcript* (Sacramento), 12 November, 1850.
- ⁸¹ *Transcript* (Sacramento), 8 November, 1850.
- ⁸² *Transcript* (Sacramento), 7 November, 1850.
- ⁸³ George D. Lyman, , “The Scalpel under Three Flags in California,” *California Historical Society Quarterly*, Vol. 4, No. 2 (Jun., 1925), 173.
- ⁸⁴ Gibbons, “Malignant Cholera in California,” 194.
- ⁸⁵ Lyman, *op. cit.*, 173.

⁸⁶ *Transcript* (Sacramento), 15, 16 November, 1850.

⁸⁷ *Transcript* (Sacramento), 29 November, 1850.

⁸⁸ Logan, "Letters from California," 572.

⁸⁹ J.B.deC.M. Saunders, *Humboldtian Physicians in California*, (Davis: University of California, 1971), 14.

⁹⁰ *Transcript* (Sacramento), 16 November, 1850.

⁹¹ Logan, "Letters from California," 568-569; *Transcript* (Sacramento), 19 November, 1850.

⁹² Irma West, "Cholera and Other Plagues of the Gold Rush," *Golden Notes*, Vol 46, No. 1, Spring 2000, Sacramento County Historical Society, 12.

⁹³ *Transcript* (Sacramento), 16 November, 1850. Johnson's italics.

⁹⁴ Doris Marion Wright, "The Making of Cosmopolitan California: An Analysis of Immigration, 1848-1870," *California Historical Society Quarterly*, Vol. 19, No. 4 (Dec., 1940), 338-340.

⁹⁵ John Snow, *On the Mode of Communication of Cholera*, www.deltaomega.org/snowfin.pdf, 30.

⁹⁶ Morse, op. cit., 91-92.