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[HOME](#) [ABOUT](#) [USER HOME](#) [SEARCH](#) [CURRENT](#) [ARCHIVES](#) [PHI ALPHA THETA](#)

[Home](#) > [Vol 3, No 1 \(2012\)](#) > [Iker](#)

Hard Times in the Big Easy: The Medical, Social, and Political Effects of the Yellow Fever Epidemic of 1853 in New Orleans

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From May to October 1853, the city of New Orleans, Louisiana, battled a terrifying yellow fever epidemic. During this outbreak, the city watched as over 8,000 people succumbed to the disease. The scourge incited panic among residents and caused many to flee from the city as the summer drew near. The yellow fever epidemic of 1853 in New Orleans was one of the worst epidemics in the history of the United States of America, and it inspired important changes in the city's medical, social, and political practices, both locally and nationally.

Yellow fever, also known by such names as the black vomit (*vomito negro*), "the Stranger's Disease," and "Yellow Jack," is a horrific disease.^[1] In its mildest form, patients exhibit symptoms resembling those of influenza. Yellow fever is a mosquito-borne illness, but immunity depends upon acquired resistance. People who survive a bout of yellow fever are safe from the disease thereafter. According to Peter Wood's *Black Majority*, yellow fever is "least fatal to infants and small children, [and] the more constant its presence among a population the more widespread their immunity." ^[2] Its more "classic" form begins with a fever, muscle aches and chills, followed by liver failure, which causes jaundice, and hepatic (liver) congestion.^[3] Systemic dysfunction of the clotting system causes the gums, nose, and stomach lining to hemorrhage, and the blood appears black when vomited. Renal failure, which arrests urinary function, precedes death by a day or two. In fatal cases, patients die within a week. The patient is close to death when jaundice or vomiting manifest, and thus treatment after this point is usually ineffective.

The summer of 1853 in New Orleans was mostly hot and dry, but July was warm, gloomy, and rainy – ideal conditions for yellow fever to invade the city. The "mosquito hordes" were worse than ever, but New Orleans citizens only saw them as a nuisance.^[4] The first hypothesized case of yellow fever in the city occurred on May 28 in one of Dr. E. D. Fenner's wards in Charity Hospital. Fenner inquired as to "whether anything like yellow fever had been seen" yet that year.^[5]

Yellow fever broke out around the city, but it was not until June 10, 1853 that a case was definitively diagnosed.^[6] It had been six years since the last notable yellow fever epidemic, and so the people of New Orleans commonly thought that yellow fever was, as yellow fever historian John Duffy points out, an "obsolete idea."^[7] New Orleans newspapers tried to hush up the outbreak until it was too noticeable to keep quiet. Papers noted the increased mosquito activity, but did not draw a connection between the two evils. After the week ending on July 23, during which more than 400 individuals died of

Molly Iker

yellow fever, periodicals began to discuss the epidemic openly. The press commonly ignored the mounting death tolls until they truly could not be ignored any longer. They instead reported about street contractors, who were so negligent in their duties that human waste coated the streets along with the putrefying carcasses of dogs killed off to prevent the spread of rabies.

New Orleans newspapers finally acknowledged the crisis on July 22. Figures from the week ending on July 23 showed 429 deaths attributed to yellow fever. The worst was over by August 23, though many were still ill. From June 1 to October 1, 1853, 8,096 individuals died from the yellow fever epidemic.^[8]

Dr. Stanford E. Chaillé stipulated that the yellow fever epidemic of 1853 was "so exceptionally terrible as to have well deserved its characteristic designation, 'the Great Epidemic.'"^[9] Though supposed at the time to have exhausted the unacclimated material on hand, this was nonetheless followed by epidemics in 1854 and 1855, each of which caused a mortality similar to their most malevolent predecessors, except 1853.^[10] A majority of those who perished in the epidemic of 1853, according to Chaillé, were "unacclimated immigrants, chiefly from 15-40 years old."^[11] This was a result of the influx of immigrants to New Orleans in the previous six months, who came to take advantage of the prosperous economic environment in the Southern United States.

Reports of the fever's rampage reached people all over the United States. C.S. Knapp wrote to Dr. Joseph Slemmons Copes that "with much regret [he had learned] that the yellow fever continue[d] to prevail to an alarming extent in [the] City [... and he] had felt much anxiety about [the Copes family]. The accounts which reach[ed the Knapps were] truly alarming but [he trusted] the disease [would] soon abate and the daily reports of deaths show a rapid decrease."^[12] Amos Kent, a New Orleans resident, wrote to a friend in Boston about the yellow fever outbreak. He argued that as long as the weather continued to be warm, New Orleans would hear "of cases of the 'yellow Fever.' The country people [would still fear] to visit the towns, but one good frost would make the whole country healthy. Then never ha[d] such a pestilence been known in this country before."^[13]

Though letters and diary entries concerning New Orleans between May and October of 1853 contained much news other than that of the yellow fever epidemic, inevitably they held a line or two detailing the horrors of the sweeping scourge. In his journal, William P. Riddell, a resident of New Orleans who professed to be entirely unconcerned with the deadly disease waging war on his city, wrote that "the yellow fever reports [were] on the ascendancy, and for the 24 hours ending at 6 o'clock yesterday morning they reached a higher figure...than they ha[d] ever done before."^[14] Thomas Kelah Wharton, an artist and architect from New Orleans, was out of town during the yellow fever epidemic of 1853, but he wrote about it constantly in his journal. On August 2 he learned that "The New Orleans Bulletin estimate[d] the mortality of the week (July 23rd) by yellow fever at 500 and state[d] that it [was] raging to an extent wholly without precedent. The Dispatch [gave] 126 deaths by Fever on the 30th last."^[15]

The yellow fever epidemic of 1853 also hindered communication between New Orleans and the rest of the country, as it spared no one in its rampage. W.A.T. Wood, the architect of the New Customs House in New Orleans was a personal friend of Thomas K. Wharton. In his diary, Wharton transcribed a letter

from Wood, who cited "the Terrible Epidemic as the reason of his not writing before."^[16] Wood poured out his fear to Wharton, stating that "in this epidemic neither age nor condition is exempt from the hands of the destroyer. The infant, the aged, the vigorous, the infirm, the Creole, and the stranger, all are Subject to be prostrated, and many never to rise again. I congratulate you on your absence from The City, now The 'City of Sorrow' [sic]."^[17]

Just as the yellow fever epidemic of 1853 tore asunder the personal lives of all who lived in New Orleans at the time, so too did it tear away at the commercial fabric of the city. C.S. Knapp speculated that "this fearful epidemic [would] be so disastrous to the prosperity of N. Orleans, that it [would] take several years for her to recover from it [sic]."^[18] Indeed, with the various quarantine and sanitation acts with which New Orleans politicians experimented, the commerce of New Orleans significantly declined as a result of the yellow fever outbreak of 1853.

The yellow fever epidemic made an impact on various social clubs and organizations as well as on business within New Orleans. The members of the branch of Excelsior Lodge in New Orleans stated in the minutes of their September meeting that it was "utterly impossible to hold the regular meetings of the Lodge on account of the most frightful and fatal character which fell on the members of the Order and the Community in general to an alarming extent [during which they] were so sorely afflicted that those that were not attacked barely had sufficient time to minister to the wants of those suffering from the malignant disease, Yellow Fever."^[19] However, while the disease forced social clubs such as the Excelsior Lodge to cancel meetings during the epidemic, other clubs came to life during the panic that ensued during the yellow fever outbreak.

Two charity organizations, Charity Hospital and the Howard Association, cared for the victims of yellow fever in New Orleans in 1853. The Howard Association was a group of young businessmen that took charge during yellow fever epidemics in New Orleans. These men, along with the nuns and doctors who worked at Charity Hospital, tended to those New Orleans citizens stricken with yellow fever who lacked the financial means to obtain medical attention.

New Orleans essentially shut down to focus on (or to escape from) the yellow fever epidemic by the beginning of August. The City Council had even adjourned for the summer in order to escape the threat of disease, thus leaving everything to the aldermen who composed the rest of the city's governmental structure – and to the Howard Association.^[20]

August 20, called "the Black Day," saw 300 individuals die of yellow fever.^[21] This was the largest number of people to die in one day during this epidemic; the worst was over by August 23. By August 24, the disease had killed one out of every 12.5 persons in a population of 75,000. Though the people of New Orleans noticed the downward trend in the mortality rate of yellow fever, quite a few individuals were still ill, and thus fear lived on.^[22]

Businesses did not reopen until October 8, 1853, and public schools opened on October 10 after postponing school for a month. The citizens of New Orleans knew that new cases of yellow fever would

Molly Iker

not appear after the first frost, which occurred early in October 1853.^[23] The people of New Orleans simply picked up life where it left off and lived like tragedy had never struck. In their minds, a lot of people had died, but life continued, and the fact that they were still alive should be celebrated.^[24] They had survived the horror that remains the worst yellow fever epidemic the nation ever experienced.

Medical treatment for fevers such as malaria and yellow fever was not standardized in the 1800s. Extremely common in the 1800s were what author Alexander Bell termed "trial-and-error therapeutics," in which physicians prescribed treatments that induced "vomiting, sweating, or the evacuation of the bowels or bladder," bleeding, and used varying quantities of quinine, lead, mustard, calomel, castor oil, and other nineteenth century medicines.^[25] Occasionally, allopathic physicians also utilized oil of turpentine to treat yellow fever.^[26] Alternatively, some New Orleans physicians practiced homeopathy, which, in the case of yellow fever, emphasized tincture of camphor, "hot foot-baths, warm fomentations, and other sudorific appliances, (with the exception of herb-teas)," arsenic, nitrate of silver, and abstention from eating for three or four days.^[27] No physician knew the exact remedy for yellow fever, and thus every physician's approach to treatment changed over the course of the epidemic. This was the case from the introduction of yellow fever to New Orleans until about 1905, when the army doctors discovered the mosquito vector of the disease.

By the end of World War II, yellow fever prevention was significantly more advanced than in the 1850s. Paul Starr, a public health expert, revealed that "an advisory board on medical research reported, 'Penicillin and the sulfonamides, the insecticide DDT, better vaccines, and improved hygienic measures have all but conquered yellow fever, dysentery, typhus, tetanus, pneumonia, meningitis. Malaria has been controlled.'"^[28]

However, in 1853, the treatments for yellow fever were less scientific and more unconventional. Clarissa E. Leavitt Town, a resident of Western Baton Rouge Parish in 1853, wrote in her diary that she read in a magazine "that persons making use of rain water, both externally and internally, were less liable to Yellow fever and cholera."^[29]

Some physicians took alternative approaches to treatment, such as one Dr. Dalton, the physician who treated the Campbell family during the yellow fever epidemic in 1847. Immediately upon becoming sick, Mr. Campbell's sons were given doses of calomel; Mr. Campbell had "their feet bathed in warm mustard water and castor oil also given a few hours after. The medicines took their appropriate course but the fever, nevertheless, instead of abating increased."^[30] Dalton was, according to Dr. Joseph Slemmons Copes' brother-in-law Mr. Campbell, an "advocate for the application of Cold water as one part of the treatment of Yellow fever [...and] recommended that cold water should be applied to [Campbell's sons'] heads."^[31] Campbell "found that a wet cloth placed on a head fired by yellow fever [was] a matter of very little effect since it soon [became] as warm as the head itself."^[32] In a fit of inspiration, Campbell "took off the cloths, drew up chairs to their bedsides and placed a wash bowl on each chair; placed the head of each in succession...over the bowl in about a horizontal position and from a pitcher poured cistern water upon the forehead and upper part of the head until the head became reduced to the mild

temperature of the water." [33] Campbell found some measure of success, for after "some two hours he found the general heat of the body became diminished, and eventually Thomas [Campbell's son] burst into a beautiful perspiration, and the fever was gone." [34] Dr. Daltan approved the treatment, and "directed that [Mr. and Mrs. Campbell] should for the time being permit [their sons] to enjoy their sleep and that during intervals of the night [the children] should taste quinine." [35]

Quinine, now used as a method of treatment for malaria, was frequently used as a cure-all in the nineteenth century. Doctors prescribed it as a fever-reducer and pain reliever, and many ill individuals would take several grains of quinine before ever summoning a physician. However, according to Charles W. Boothby, a Union soldier stationed at New Orleans during the Civil War, one could "destroy [a] fever by taking quinine, but much of it [was] a severe medicine for the system." [36] Some physicians recommended quinine in such large doses that it poisoned the patients so much that, according to a report on quinine toxicity, "profuse vomiting, abdominal pain, and diarrhea" occurred. [37] In these cases it was more common that the recommended treatment for the disease killed the patient, rather than the disease itself. Quinine overdoses occurred frequently with yellow fever patients. Additionally, other types of medicines were recommended for yellow fever, and not abandoned when it was noted that they did more harm than good, or at least did nothing to relieve the symptoms of the disease.

Various treatments were prescribed for yellow fever, though not all of them had the desired effect. Doctors frequently prescribed calomel, or mercury chloride, to yellow fever patients in the nineteenth century. Annie Jeter Carmouche, a Southern belle in 1853, noted that one "Dr. Stone, who was among the first physicians of the city, would persist in giving calomel." [38] After a general conference of New Orleans physicians in 1853, Carmouche realized that "calomel was discarded by all except Dr. Stone – his patients died and rather than give up calomel, he gave up his practice and went to New York until after the Epidemic." [39] Conversely, Dr. Cartwright, upon his patient William P. Riddell contracting yellow fever on September 14, 1853, prescribed "some tartar emetic and ordered the application of hot cloths, mustard bath etc 'till morning." [40] This treatment, unlike calomel, seemed to work, as the patient was up and about and writing in his diary eleven days later.

Part of the difficulty in finding a cure for yellow fever can be traced to the differences in training styles at the various medical schools around the world. In fact, most medical schools in the 1850s were run as for-profit businesses; anyone willing to pay the fees and attend lectures could earn a degree in medicine, regardless of his academic performance. Apprenticeships were not regulated, and in some cases, not required at all. Louisiana repealed its laws regulating medicine in 1852 for no reason other than that these "wise and adequate laws were not enforced by the Medical Boards." [41] As a result of this erratic education, and because of the similarity in symptoms, New Orleans physicians in 1853 frequently misdiagnosed yellow fever as intermittent fever (malaria) and did not know how to treat it. Professor Stanford Emerson Chaillé, M.D., of the Executive Committee of the New Orleans Auxiliary Sanitary Association admitted, "The truth is, that, whilst most cases of yellow fever can be recognized readily even by the ignorant, there yet are many cases which the wisest, most erudite and most experienced physicians cannot, with certainty, distinguish." In fact, Chaillé argued that "difference of

Molly Iker

opinion and controversy are such inevitable results that yellow fever has never occurred, at any time, in any place, without giving rise to them."^[42]

Domestic treatments for yellow fever were abundant in the 1850s. Annie Jeter Carmouche remembered that "in those days when sick with yellow fever you were not allowed to change your night clothes or bedding until you had been up some time for fear of a chill."^[43] Additionally, Carmouche realized that New Orleans inhabitants in 1853 thought it necessary for yellow fever patients "to be extremely careful in their diet...Some friend out of mistaken kindness, would often send something to one thought to be out of danger a month – and after eating it would die that night."^[44] However, they were not certain which foods were dangerous to yellow fever patients. Unitarian minister Theodore Clapp recalled that "the eating of a salt herring was once followed by the recovery of a Frenchman and the death of an Englishman...Milk, coffee, London porter, and various other articles have sometimes cured black vomit, at others they only helped on the disease. A process which has cured the yellow fever one year, the very next will destroy all the patients."^[45] Though these remedies were not generally effective, some domestic practices were successful in preventing yellow fever.

Many people such as Marianne Edwards in the 1850s and Charles W. Boothby in the Civil War used mosquito netting to escape from the hordes of insects that plagued New Orleans and its surroundings, unwittingly fending off yellow fever in the process. Marianne Edwards wrote in a letter that she "bought ten yds of mosquitew netting and made curtains for all the windows in the after cabin and State room [on the ship she lived on]. Guy [her husband] nailed them up so it is impossible for any to get in. Then [they] put them to the door of this cabin." A few mosquitoes somehow got into the cabin despite the mosquito netting, but she assured her correspondent that "those we take care to kill before we go to bed."^[46] This homegrown precaution, though not entirely intended as such, was in fact the most effective safeguard against yellow fever.

Though treatment remained a source of contention among physicians in 1853, the origin and cause of yellow fever seemed a larger issue. Most modern authorities agree that yellow fever made its debut in New Orleans in 1796. According to yellow fever historian Jo Ann Carrigan, in that year, New Orleans "possessed the necessary elements for a major epidemic explosion."^[47] These included a huge white populace with many newcomers who had never been exposed to yellow fever living in close quarters near the riverfront, and a mosquito population that had a permanent local base. This situation was replicated in New Orleans in 1853. The concentration of immigrants in the Big Easy who were not immune to the disease was so high that yellow fever was able to tear through the city with terrifying results.

Yellow fever appeared in epidemic form in New Orleans after six consecutive years of relative health, which raised questions about the disease's origins. New Orleans Mayor Abdil Daily Crossman stated that this fact, "coupled with the extreme malignity of the disease and its appearance in the most fatal form, [led] many to embrace the theory that the...epidemic was not of domestic origin, but imported."^[48] Charles Delery, a French physician, contended that yellow fever originated in Thailand

(then Siam), and called it "*mal de Siam*" because of the yellow color that pervaded the humors, eyes and skin of a patient.^[49] Delery hypothesized that yellow fever found its way from Thailand to the West Indies and Mexico. From these areas, the malady entered the United States, where it often appeared at Charleston, Philadelphia, New York, and all of the cities that traded with these commercial centers.^[50] This idea of importation compelled many of the citizens of New Orleans to campaign for the establishment of a strict and permanent quarantine in order to provide security against the disease in the future. Other citizens contended that the fever was of local origin. They argued, therefore, that quarantine regulations were useless, but they offered no alternative method of securing the city against yellow fever in the future.

Theories of contagion vied with theories of miasma in 1853 debates about the cause of yellow fever. Some physicians argued that the disease originated in the odors rising from the filth that covered the streets. Dr. Stanford E. Chaillé mentioned that "the sanitary condition of New Orleans...has been one long, disgusting story of stagnant drainage, foul sewer-age, environing swamps, ill-and un-paved streets, no sanitary regulations, and filth, endless filth everywhere."^[51] In accordance with Dr. Chaillé's observation, the sanitary condition of New Orleans in the summer of 1853 steadily worsened until gutters and drains became open sewers, and streets and alleyways were clogged with manure, rotting dog carcasses, and other waste.^[52]

Many people believed in the miasma theory. These individuals claimed that a miasma that could transmit yellow fever existed in ship holds, clothes, trunks, and anything that could trap odors and bring them to other places. William L. Robinson was a member of the Howard Society, a charitable organization that treated yellow fever patients during epidemics. Robinson realized that "the miasma from neglected streets, combined with continued diminution of the vital principle in the atmosphere, from even a short expos[ure] to putrefaction before burial" made the City Council try all sorts of "far-fetched theories of disinfection."^[53] To rid the city of the miasma, Mayor Crossman ordered the "firing of cannon at sunrise and sunset in various sections of the city,"^[54] which was thought to cleanse the air. Crossman also ensured that "barrels of tar were placed on street corners and burned during the night."^[55] All of these efforts were attempts to rid the city of a miasma that rose from the ground at sundown; E. D. Fenner believed the miasma was caused by the "filth, overcrowding, and decomposing organic matter" that physicians and newspapermen noticed collecting in the streets of New Orleans.^[56] For long-term solutions, supporters of the theory of the domestic origin of yellow fever supported a policy of sanitation, and some also supported the imposition of quarantine laws.

Those who did not have faith in the miasma theory believed instead that yellow fever was contagious. Little was known of contagion at the time, so this theory was given little credence by New Orleans society or by physicians who favored the miasma theory. Dr. Chaillé believed that "yellow fever, typhoid fever and cholera [were] usually only indirectly contagious, and all three [were] due to germs that grow in the human body."^[57] While he believed in the miasma theory, nonetheless, Chaillé admitted that "the doctrine of the spontaneous origin of yellow fever on ships [was] theoretically incredible, and...practically destitute of proof derivable from a solitary instance of the infection of any vessel, which

Molly Iker

had not previously communicated directly or indirectly, with some infected place, thing or person." [58] Chaillé remarked that "this doctrine [existed] due to ignorance respecting the duration of the dormant vitality of the yellow fever poison, and to hasty credence in the negative evidence that an infected vessel had not previously communicated with any source of infection." [59] Chaillé's literature on the miasma theory of yellow fever revealed that the pestilence remained a mysterious entity, but was not believed to possess communicable qualities.

Individual thinkers could not agree on the extent to which yellow fever was contagious. Chaillé maintained that "the poison of yellow fever must [have been] either an inorganic or dead organic substance, or, on the other hand, a living organism. Very few, if any, even of those who [credited] its spontaneous origin, [denied] that this poison [possessed] reproductive power." [60] He decided "either that the poison [had] not the power of self-multiplication, or that other than living organisms [had] this power." [61] However, S. L. Grier resolved that "Yellow Fever if not absolutely *contagious* [was] at least *communicable* under certain conditions and circumstances, and [was] frequently transmitted by subjects of the disease and by fomites." [62] Chaillé and Grier described two of the many distinct ideas on the controversially infectious nature of yellow fever.

Several individuals, including physicians, believed that yellow fever was an intensification of germs from another source; this source could be either geographic or pathogenic. After the 1853 yellow fever epidemic, Dr. J. L. Riddell, a New Orleans physician, reported that the "yellow fever of 1853, [was] personally contagious; that the poison, virus or material cause producing it, does not emanate in an active condition from the person of the patient laboring under the disease." [63] Riddell went on to reveal that "although black vomit fevers or types of yellow fever may perhaps [have originated] in this region, yet, that the germs of our epidemic of 1853, [were probably] derived from countries further south." [64] Chaillé addressed "the old theory, still entertained by a few, that yellow fever was due to an intensified malarial poison," declaring it "so untenable, that those who [were] well informed [did] not require even this brief allusion to guard them from the misapprehension, that silence on this subject implies assent to such a theory." [65] From the late eighteenth century to the end of the nineteenth century, the cause of yellow fever was fiercely contested, but neither theory triumphed over the other in popular opinion.

Most individuals endorsed the miasma theory as a result of the lack of knowledge about contagion. Additionally, because they were working in a pre-germ theory orientation, the miasma theory provided the most sensible explanation. However in 1900, as the United States was endeavoring to rehabilitate Cuba after the Spanish-American War, an American surgeon, Dr. Walter Reed, officially discovered the cause of yellow fever. Dr. Reed conducted research on the cause of yellow fever in Cuba, where that disease was endemic. According to Dr. Chaillé, Dr. Walter Reed discovered "that the female *stegomyia* mosquito was an agent by which the poison of yellow fever was disseminated." [66] Dr. Chaillé also noted that Reed's team discovered "that this poison was gained by sucking it from the blood of a person sick with yellow fever during the first three days of the disease," as well as the fact that "it required not less than twelve days for the poison to mature in the body of the *stegomyia* before she could infect any one

with yellow fever." [67] The *stegomyia*, or *Aedes aegypti*, mosquito prefers to breed in fresh water and particularly favors cisterns, puddles, flowerpots, and other urban sources of water.

Though the mosquito vector had been discovered at last, Southern cities were loath to participate in anti-mosquito measures (such as putting a layer of oil in their cisterns), as they did not trust this new scientific finding. Only after it had been proven that mosquito prevention measures also helped prevent yellow fever did Southern residents actively participate in the prevention measures. [68] The discovery of the mosquito vector also proved the widely censured theory that yellow fever was, in fact, contagious.

During the yellow fever epidemic of 1853 in New Orleans, physicians and politicians ferociously debated the cause and origin of Yellow Jack. Many believed in the miasma theory, while some claimed that the disease was contagious. The cause and origin of the disease determined the physicians' treatment and diagnosis of the disease. In addition, yellow fever's cause and origins determined politicians' proposed legislation to endeavor to secure the city against the disease in the future. That these factors were unknown in the 1850s only made doctors and lawmakers more determined to discover the cause while keeping the disease at bay.

Though the cause of yellow fever was unknown to physicians and politicians in 1853, these men debated the issues of quarantine, sanitation, and public health. Politicians and physicians centered the initial quarantine discussion on the quarantine of ships entering the port of New Orleans. The Louisiana Legislature considered the quarantine question, but tabled the discussion after no agreement could be reached. Mayor Crossman stated that he was "of the opinion that quarantine, under proper regulations, would be to the interest and benefit of the city." [69]

Doctors expressed their opinions about the quarantine question as well. William P. Hort, a New Orleans physician, was against quarantine regulations as they hindered trade. He claimed that yellow fever was of local origin, and that "quarantine laws [were] unnecessary and inexpedient for the protection of the city." [70] Conversely, E. D. Fenner, a visiting physician, was in favor of "quarantine for the purpose of keeping off Yellow Fever, provided *more rational and hopeful methods of protection be not neglected* [sic]." [71] The Sanitary Commission of New Orleans recommended instituting a quarantine policy, though they admitted that "the protection afforded by quarantine inspire[d] less confidence than it formerly did." [72] J.S. McFarlane, a New Orleans physician, argued that "quarantine laws were formerly enacted—in haste after a desolating epidemic, having been found to be useless, they were abolished, and [New Orleans'] rulers [were] invoked by the wise men of the East...to reenact them." [73] McFarlane advised that the city quarantine itself against visitors, as these individuals ended up committing crimes and dying from yellow fever. [74]

Constant traffic in and out of New Orleans assured the spread of yellow fever across the Southern United States. Quarantine law varied by city, and trade facilitated the spread of the disease. Quarantine was not enough to contain yellow fever, and thus almost every port city that had contact with New Orleans during its yellow fever epidemic of 1853 had an epidemic of its own, albeit on a much smaller

Molly Iker

scale.^[75] This was true in epidemics preceding and following the yellow fever epidemic of 1853 in New Orleans as well.

Quarantine policy had a varying success rate in New Orleans in the nineteenth century. Stanford E. Chaillé revealed that, in New Orleans, "the first Quarantine established was maintained only four years, 1821-4, having been abandoned in early 1825 from the general conviction that it had proved worse than useless, for yellow fever was present every year, and to the extent of a very violent epidemic in 1822, and an epidemic in 1824."^[76] Chaillé also discovered that "after thirty years discontinuance, the Quarantine was re-established in March, 1855," and it continued through 1870 regardless of the fact that "very violent epidemics occurred in 1855, 1858, and 1867."^[77] The Louisiana Legislature acknowledged that it had to try a different tactic, and thus endeavored to adapt quarantine regulations to prevent the spread of yellow fever.

Quarantine law in New Orleans was not always confined to incoming ships. Stanford E. Chaillé explained that "the experiment of quarantining houses was tried for the first time in New Orleans in 1897."^[78] However, despite the Louisiana Legislature's intentions, this measure, according to Chaillé, "aroused very great popular dissatisfaction, and it greatly discouraged prompt diagnosis and notification." Nonetheless, he noticed that this measure's "partial execution did much good by diminishing the number of cases [of yellow fever] and reducing the number of deaths to only 298."^[79] Unfortunately, Chaillé learned that "in 1879, yellow fever prevailed in twenty-five places in Louisiana, and the deaths in some insignificantly small places exceeded the nineteen in New Orleans,"^[80] thus affirming that quarantining houses and ships did not effectively impede the spread of yellow fever across the South.

Several physicians and politicians were also against quarantine legislation. William P. Hort raged that "there [was] no occasion for quarantine laws [and that] experience [showed] them to be useless...while they [were] very expensive."^[81] S.L. Grier, an opponent of quarantine, posited that yellow fever was a disease that prevailed "almost exclusively in seaport towns, and in places directly in communication with these seaports, either in the way of travel or of trade."^[82] Grier was in favor of sanitation reform rather than the institution of quarantine law. He stipulated that "the principal difficulties against which it [was] necessary to guard in establishing quarantine for New Orleans, [were] presented by the Tow Boats engaged in towing vessels from the mouth of the river. These boats, by communicating with infected vessels, or towing them up abreast, or even at hawser's length, [became] liable to infection, and in turn [became] the medium of infecting the city."^[83] Quarantine was thus rendered ineffective.

A large number of doctors and elected officials supported quarantine policy. Stanford E. Chaillé advocated quarantine policy, though he acceded that "*absolute* non-intercourse with the poison of yellow fever [was] as impracticable as *perfect* local sanitation [sic]."^[84] He opined, "...if quarantine protected us from even one out of twenty [yellow fever] epidemics, the amount thus saved would [have] amply repay[ed] all the loss incurred by many years of quarantine-restrictions on our commerce with infected ports."^[85] Chaillé also recognized that quarantine's "opponents declare[d] that it should

[have been] abandoned because it...failed...to give protection. In truth, quarantines have very often failed...A perfect quarantine, one capable of securing absolute non-intercourse with the poison of yellow fever [was] even more impracticable than the prevention of all smuggling."^[86] Nonetheless, Chaillé and many other politicians and physicians promoted the establishment of quarantine legislation in New Orleans.

Supporters of the institution of quarantine policy in New Orleans understood that the Crescent City's inhabitants survived on the profits of commerce, and that any quarantine that allowed yellow fever to enter New Orleans would inevitably put profitable trade in jeopardy.^[87] Chaillé postulated that the status of commerce compelled the population of New Orleans to "compromise, first, by establishing outside the city, quarantine against vessels and their contents, thus striving to reconcile the interests of health and commerce; and, second, by resorting, within the city...non-intercourse with infected persons and houses."^[88] Chaillé's position as a promoter of quarantine policy was popular with a large number of New Orleans politicians and doctors, but others believed that quarantine was unquestionably the incorrect course of protection against yellow fever.

Sanitation reform became a point of extreme political contention along with quarantine legislation. Those individuals who believed in the miasma theory, which hypothesized that yellow fever rose as an odor from the streets of New Orleans at sundown, advocated sanitation reform. Mayor Abdil Daily Crossman assured the New Orleans Common Council that he was strongly in favor of ridding the city's streets of the filth that coated them, as well as imposing quarantine laws. However, J.S. McFarlane stipulated that it would take "one hundred years of steady, rational perseverance in hygienic policy, to bring the city of New Orleans up to even the natural standard of salubrity of Charleston, Mobile, Pensacola or Galveston, and these cities are periodically visited by yellow fever."^[89] He maintained that the city needed patient and steady sanitation reform that was strictly enforced before any eradication of yellow fever could take place.

While the medical community was divided on the issue, the public was more unified in their idea of the cause of yellow fever. The people of New Orleans blamed the yellow fever epidemic on the corruption of the government, and especially that of the street cleaners. John Duffy, an expert on the 1853 yellow fever epidemic, commented that the city's streets were filthy with "night soil" and the bloated carcasses of dead animals.^[90] Once Yellow Jack latched onto the Crescent City, by July 6, 1853, human bodies joined those of animals to bloat and rot on the streets in the sunlight.^[91] In fact, once the death rate increased steadily enough, people died faster than graves could be provided. Some sextons and gravediggers handled this problem by simply leaving the bodies piled on the ground, swollen so much from the heat that they broke through their coffins. This practice soon gave way to long, shallow trenches in which sextons and gravediggers piled coffins in pyramids and covered them with a few shovelfuls of dirt. The daily rains washed the dirt away, and the coffins allowed the stench of the decaying bodies to ooze out, plaguing the gravediggers as they worked.^[92] It became so malodorous that even the toughest stomachs required strong liquor as fortification to endure the work. The city grew so desperate for gravediggers that, according to Jo Ann Carrigan, the government hired both

Molly Iker

"Negroes and whites...at five dollars per hour."^[93] Given the fact that, in 1853, Louisiana remained a slaveholding state, this was an admission of extreme desperation by the New Orleans government.

The sheer number of human corpses that required burial per day astounded gravediggers. As such, several New Orleans citizens suggested cremating the bodies, as it was a far more sanitary, efficient, and cost-effective solution. Unfortunately, New Orleans was so consumed with its perceived image as a health spa in the Southern United States that it refused to accept this alternative to the putrid smell of decaying human flesh that now cloaked the city.^[94] Government officials believed that cremation would make New Orleans look backward, unchristian, and even devilish. Such a reputation would inevitably drive away tourists. However, once the government began firing cannons to "purify the air" and burning tar for the same purpose, massive columns and clouds of smoke obscured the city; New Orleans, far from being seen as a health spa, was perceived from afar as a glowing, deathly fire pit that could not afford to give its citizens a proper Christian burial.^[95] Indeed, it even became known as a "charnel house" across the country, a house of skeletons that scared potential investors, visitors, tourists, and workers away from the city.^[96]

New Orleans physicians occasionally acknowledged the necessity of sanitation reform. After the epidemic of 1853 ran its course, Dr. J.L. Riddell, a sanitation reform advocate, argued that "the city should [have been] kept cleaner than heretofore, by efficient drainage, and sanitary regulations carried into effect."^[97] Riddell also declared that "legal ordinances should [have been] framed and carried into effect, to prevent the undue huddling together of human beings, within the limits of the city."^[98] In 1870, Stanford Emerson Chaillé noted that "the sanitary condition of New Orleans for the whole time, excepting the four years 1862-5, [was] one long, disgusting story of stagnant drainage, foul sewerage, environing swamps, ill-and un-paved streets, no sanitary regulations, and filth, endless filth everywhere."^[99] Chaillé supported quarantine legislation, but admitted that the city would benefit from sanitation reform, even if yellow fever did not originate in the filth that covered the Crescent City's streets. He went on to note that New Orleans was "kept in much cleaner condition [from 1862-5] than it ever had been before...as clean perhaps as an 'efficient sanitary police' could keep it."^[100] Though Riddell and Chaillé both wrote about yellow fever, they were on opposite sides of the sanitation reform issue; nevertheless, they agreed that improved sanitation, regardless of the cause of yellow fever, was a necessity in New Orleans.

Still more doctors voiced their opinions on sanitation improvement in the Crescent City in 1853 and in later years. Doctor S. M. Beamiss noted that "it [was] asserted, and In so far as [his] knowledge [went], the assertion remain[ed] uncontradicted, that 'four thousand loads of kitchen garbage' had been used to fill up streets in the early part of 1878 [sic]."^[101] Beamiss lamented that "one of the most disagreeable and common nuisances against the senses, and probably against health, was committed daily during the whole epidemic by street scavengers and street sprinklers. The former would drag cart loads of offensive mud from the gutters and leave it exposed in the streets, often for days or even weeks before its removal."^[102] Chaillé, though always an advocate of quarantine policy, argued in 1882 that "to prevent disease, it [was] indispensable that a general and profound conviction [grew] up among the

people, that they [had] this matter under their own control, that disease [was] just as much due to violation of the health-laws of nature's God as the burning of a finger is due to the ignorant or careless application of fire."^[103] Thus, although Chaillé promoted sanitation reform, he did not associate it with yellow fever in particular, but rather with disease in general. Beamiss and Chaillé agreed that the condition of the streets was so disgusting that, regardless of the filth's relation to the cause of yellow fever, the city needed to take action and institute sanitation reform.

Chaillé was an advocate of quarantine legislation in the case of yellow fever, but in the case of New Orleans as a city, he was in favor of sanitation reform. Chaillé stipulated that "none except an enlightened people [could] secure efficient sanitary laws and officers; and, as long as the people continue[d] to be ignorant, inactive and disunited, these laws and officers, even if they were perfect, [would] continue to fail to gain more than very limited victories in the warfare against disease."^[104] He continued, saying that "there [were] only two preventive measures, namely, *cleanliness* and *non-intercourse* [with yellow fever]; although several subdivisions of each of these [were], for convenience, usually made [sic]."^[105]

Dr. Chaillé did not entirely oppose sanitation reform in the case of yellow fever, but he doubted New Orleans' dedication to the stringent measures necessary to fully disinfect the Crescent City. He also suggested that the lifelong dedication that sanitation reform necessitated would baffle the citizens of New Orleans. Chaillé revealed that "when the sanitarian advocate[d] the cleanliness of a city, he mean[t] thorough cleanliness and purity, not only of person, but also of houses and streets, not only of food and water, but also, and above all else of the air..."^[106] He went on to note that "thorough cleanliness of a city necessitate[d] such construction of houses as would secure their perfect ventilation, leaving not one reservoir for confining foul air, and it necessitate[d] a perfect system of sub-soil as well as of surface-drainage. Without these things, every breath inhaled may be impure and laden with the poison of a fatal disease."^[107] Chaillé concluded that "to secure *perfect* cleanliness, New Orleans, like other cities, [required] many years of labor, the expenditure of millions of dollars, and, to sanction these, a population exceptionally enlightened and prosperous."^[108] Nonetheless, Chaillé recommended sanitation reform and presented it as a worthwhile endeavor for New Orleans.

Although many physicians and other individuals were in favor of instituting sanitation reform, the fact remained that the street commissioners in New Orleans in the nineteenth century were corrupt. To rectify this situation - and to regulate quarantine law and other health-related legislation – the Louisiana Legislature discussed creating a state board of health. This board of health was established in 1855, two years after the largest yellow fever epidemic New Orleans ever encountered.

Charity Hospital and the Howard Association, two non-profit organizations, cared for the victims of yellow fever during the 1853 epidemic. They provided care and medicine for their patients free of charge, utilizing monetary donations from cities across the United States.^[109] The Howard Association began to act as an unofficial board of health for New Orleans. Though the New Orleans government customarily appointed a temporary board of health for each epidemic, the Louisiana Legislature

Molly Iker

neglected this duty in 1853, perhaps because a board of health had not been provided for in the 1852 reorganization of the New Orleans City Government.^[110]

In the 1840s and 1850s, Southern public health awareness began to evolve. The usual public health measures of statistics and hygiene were unsuccessful in the prevention of yellow fever, so public health officials turned to managing and enforcing quarantines. McFarlane called the proposed permanent health board "onerous and extravagant in every particular...replete with evils to [New Orleans] citizens and...a curse instead of a blessing."^[111] Though a board of health was appointed during almost every previous epidemic, it was not until March 15, 1855, after a smaller epidemic in 1854 followed the lethal epidemic of 1853, that the Louisiana Legislature passed "An Act to Establish Quarantine for the Protection of the State,"^[112] which created a board of health to enforce the quarantine laws: the Louisiana State Board of Health.

The Louisiana State Board of Health was the nation's first permanent public board of health. It consisted of sixteen members, including the Mayor of New Orleans. The Common Council elected these members, and no more than seven could be practicing physicians. The Common Council of New Orleans appointed Mayor Crossman president of the Board of Health, but according to the statute he could not "vote except in the case of an equal division of the members on any question."^[113] The Louisiana Legislature created the Board of Health as a direct result of the Great Epidemic in 1853. The statute that constructed the Board of Health designated the Board to regulate "the hours when offal and filth" were deposited in the streets, and the times when the same were "removed by the contractor for cleaning the streets."^[114]

In addition to their power over the sanitation of New Orleans, the Louisiana State Board of Health had power over many other aspects of city life. By law, they could "require the sextons of the several cemeteries of the parish of Orleans to make returns to them...and to impose penalties for neglect or failure to make said returns."^[115] The Board also possessed the power to require physicians to report which illnesses they were treating at any given time. Every month, a different doctor on the Board inspected all of the ships that came into New Orleans. The statute required the Secretary of the Board to publish a "weekly statement in the paper of the greatest circulation published in New Orleans, of the deaths in New Orleans...stating the particular disease of which each person died."^[116] However, even though the Board of Health was created to impose quarantine and sanitation reform on New Orleans to fight against yellow fever, the only real protection was a population that had become mostly immune to the disease, and to shut out strangers susceptible to the pestilence.

American citizens widely admired the Louisiana State Board of Health and the later National Board of Health for their standardization of medical treatments and medical practices. Dr. Chaillé noted that "in 1879, yellow fever prevailed in...Louisiana, and the deaths in some insignificantly small places exceeded the nineteen in New Orleans. The escape of New Orleans in 1879 was *claimed* to be due...to 'the isolation of cases and thorough and repeated cleansing and renovation of infected places,' effected by

the conjoint and exceptionally vigorous efforts of both the State and the National boards of Health and the Auxiliary Sanitary Association [sic]."^[117]

The Louisiana State Board of Health influenced the establishment of several other public boards of health with varying success rates. According to Paul Starr, the Louisiana State Board of Health inspired the creation of "the Metropolitan Board of Health in New York City in 1866 and the first effective state board in Massachusetts in 1869," as well as the country's first national board of health in March 1879.^[118] Though the Louisiana State Board of Health was successful in encouraging other states to form public boards of health, according to Margaret Humphreys the Louisiana Board was "viewed by the other southern and midwestern boards as the main impediment to regional harmony and safety."^[119] Humphreys also noticed that, although the Louisiana State Board of Health was one of the stimulants that foreshadowed the creation of the National Board of Health in 1879, the Louisiana Board "was actively hostile toward the National Board of Health from its inception."^[120] She went on to stipulate that "this antagonism centered most intensely around Joseph Jones, who was appointed president of the Louisiana board early in 1880."^[121] Despite all this, the Louisiana State Board of Health remained in place, and Joseph Jones' successor as president rallied confidence in Southern public health.

Joseph Holt, Joseph Jones' successor as president of the Louisiana State Board of Health in 1884, revolutionized the public health system in New Orleans and the rest of Louisiana. He campaigned for the drainage and cleaning of New Orleans, imposed quarantines, and pumped sulfur gas into the holds of ships and other places that held air to rid them of any miasma they held. These and other reforms in public health may not have done much to secure the city against yellow fever in the future (epidemic yellow fever returned to the City in 1897, 1898, 1899, and 1905), but they certainly altered the public's opinion of public health, as well as aiding in the sanitation reform New Orleans so desperately required.^[122]

The improvements of the public health system in Louisiana and the United States regulated the treatments and diagnoses of various diseases in the nineteenth century. This made physicians' tasks simpler and less time-consuming. Additionally, it made epidemics shorter and less terrifying than those from earlier in the century. However, public health expert Paul Starr revealed that the Louisiana State Board of Health "proved ineffective."^[123] Though the Boards' designated treatments were not always successful, they allowed the populace of Louisiana and the United States at large to slowly develop public health programs as well as immunity to yellow fever and other diseases, thus exposing a flaw in Starr's argument.

Yellow Jack caused a great deal of turbulence in the social interactions between New Orleans citizens throughout the nineteenth century. The disease was endemic along most of the West African coast, so slaves transported to the Southern United States from those regions likely had already contracted yellow fever and developed immunity to it. Over time, however, these slaves' descendents lost immunity to yellow fever even while they gained defenses against common respiratory infections, to which their ancestors were exceptionally susceptible when they first arrived in the United States.

Molly Iker

Regardless, Caucasian slave owners capitalized on their slaves' supposed resistance to yellow fever and used it as a justification for slavery.^[124]

African Americans were known to be significantly less susceptible to yellow fever than members of other races. Yellow fever occurred as a childhood disease (with much milder symptoms than the epidemic form) in African children. Africans and African Americans did in fact contract the disease, but did not succumb to it often, as did Caucasians. In New Orleans during the epidemic of 1853, 7.4 percent of whites who contracted yellow fever died, while only 0.2 percent of blacks perished from the disease.^[125] Doctors postulated that "immunity [to yellow fever] existed in direct ratio to the amount of Negro blood" in the individual.^[126] However, blacks were not openly suspected to be healthy carriers of yellow fever until 1905, when C.M. Brady identified that whites suffered terribly from yellow fever, while the majority of blacks, despite being infected, escaped the horrors of the disease altogether.^[127] This fact frightened the white population in the South, and led to increased hostility towards the African American populace.

Most Southern Caucasians in the 1800s shared the same beliefs about slavery. William H. Holcombe, a New Orleans physician, argued that "the institution of slavery [was] righteous and just, ordained of God, and to be perpetuated by man."^[128] Holcombe went on to stipulate that slavery was "no retrograde movement, no discord in the harmony of nature...no infraction of immutable laws, human or divine—but an integral link in the grand progressive evolution of human society as an indissoluble whole."^[129] Left to their own devices, slaves and free blacks would, according to the Southern slaveholders, devolve into barbarism. However, the overwhelming majority of inhabitants of the South were of African descent, and this frightened the Caucasians. Southern slaveholders like Holcombe decided that "man ha[d] no 'inalienable rights'—not even those of 'life, liberty, and the pursuit of happiness.'"^[130] Slaves were, as Holcombe put it, "domesticated by the white man."^[131] These household animals, as Holcombe and other Southern slaveholders saw their slaves, did not deserve to live through the yellow fever epidemics unscathed while their owners died from the disease at an unprecedented rate. That their slaves defied logic and survived yellow fever vexed Southern slaveholders, though it allowed them to tighten their grip on slavery.

Northern newspapers such as the *New York Tribune* suggested that yellow fever was a direct consequence of slavery, as many Americans believed that African slaves introduced the disease to the United States. Northerners claimed that Yellow Jack persisted as a punishment brought upon the South for the continuation of slavery. Among the deaths from yellow fever in New Orleans in the summer of 1853, 68 percent were male, the majority of which were between the ages of 20 and 39.^[132] By the calculations of the Sanitary Commission of New Orleans in 1853, "only forty-three blacks were recorded as yellow fever deaths."^[133] The white survivors of the 1853 epidemic noticed this and argued that it was a sign that slavery should continue; only African slaves could withstand the Louisiana summer's heat.

Opinions on slaves and slavery varied widely in New Orleans and other Southern cities. Clarissa Leavitt Town cared deeply about slaves' souls and welfare, but she looked down on their work ethic and their intellect. One afternoon, Mrs. Town and her daughters "were engaged till noon in rubbing furniture and arraigning the house...[because] the negroes require[d] such constant watching to have things well done [sic]" that Mrs. Town and her daughters decided it was easier to clean the house themselves.^[134] Mrs. Town's son-in-law gave sermons to a congregation of slaves as well to a white Episcopalian church, and Mrs. Town occasionally attended these services as well as the slaves' weddings. She noted these occasions in her diary, remarking on May 22, 1853 that "a very large congregation of negroes [gathered] in the afternoon...their interest in religious matters [was] on the increase, which [all white Christian slave-owners were] delighted to see."^[135] Mrs. Town's friend Mr. Buhler whispered to her during one of these services that "the abolitionists of the north would hardly credit it if told how much interest there [was] manifested in their behalf and the efforts made to give them good religious instruction."^[136] Mary Cornelia Wright, a young girl in the 1850s, kept a scrapbook of various newspaper clippings. One such clipping, an editorial by the editor of the *Wedowee Mercury*, based in Alabama, declaimed that "our niggers [were] blacker, work[ed] harder, ha[d] thicker skulls, smell[ed] louder, and need[ed] thrashing oftener than other niggers [sic]."^[137] The general sentiment towards slaves in the 1850s, whether it was violent or not, indicated that African Americans were less human and less dedicated to good work than Caucasian Americans. To a pro-slavery Southerner, these thoughts, combined with slaves' resistance to yellow fever, provided a strong argument for the continuation of slavery.

Not all United States citizens believed that slavery was a righteous institution or were frightened by the fact that slaves were relatively untouched by the yellow fever epidemic of 1853. A Southern belle, Annie Jeter Carmouche, noted that in 1853, "all [of her family's] slaves had yellow fever that year and it was very remarkable, none died."^[138] Carmouche was exceedingly concerned about her slaves during the epidemic, and felt relieved that they were undiminished. Lizzie Boothby, sister of Charles Boothby, a Union Soldier, wrote to the President of the United States in the late nineteenth century after slavery was abolished. She stated that she was "not a politician; [she did] not covet that appellation; but [she] believe[d] the time ha[d] come when every man, whether a politician by trade or not, every mechanic, every farmer, every laboring man, every man who desire[d] the peace of the country, ha[d] a duty to perform – a common enemy to meet." Lizzie went on to reveal that "it [was] now Truth opposed to error, - it [was] the exertions of a corrupt...party to perpetuate, to extend in a glaring evil, - to bury in the dust the great fundamental principles of our government, opposed to the labor of a party, which object [was] to maintain the rights guaranteed to us by The Fathers, to sustain inviolate our republican principles; - it [was] free labor opposed to labor owned by capital, - it is freedom opposed to slavery [sic]."^[139] Lizzie in fact lived in Maine, but was progressive for her time, already campaigning for the practice of equal rights for all men, including former slaves. Regardless of geographical location, not all Caucasian Americans believed that African Americans' relative immunity to yellow fever was cause for fear.

Molly Iker

Overseers did not have much faith in their slaves' integrity in the mid-eighteenth century, but slaves' hardiness in the face of yellow fever strengthened slaveholders' desire to maintain the institution of slavery. Robert Shurlds, an overseer in 1847, wrote to Dr. Joseph Slemmons Copes regarding one of Copes' slaves. Shurlds complained in a short note that "a negro man by name of Gabral live ing on the place where [he] manage[d] belonging to sam Garland, braught a large bay horse home...[and said] one of [Copes'] black men gave him the horse [Shurlds] did not beleave it he [said] [Copes] sead him when he started with the horse [sic]." [140] Shurlds went on to reveal that he "understood from some of the rest of the negroes that Gabral had only braught the horse [to the plantation Shurlds managed] only to fatten for [Copes'] boy if it [was] so [Shurlds] wish[ed] [Copes] to have him taken back as [Shurlds had] no where here for negroes to fatten horseis for others but if [Copes'] boy [had] realy given the horse to Gabral he [could] have him [sic]." [141] Overseers shared their distrust of their slaves' work ethic with the slave owners, but felt that slaves' resistance to yellow fever and their supposed resilience against Southern summers justified slavery's continuity.

Joseph Embree, a slave owner in 1861, wrote to Mr. Henry Marston, another slave owner, informing Marston that Embree's "Boy Peter [said] that [Marston said Embree] must send [Marston] a note informing [Marston] whether [Embree was] willing for [Peter] to have one of [Marston's] negro women for a wife. So far as [Embree was] concerned [he did] not desire [Peter] to have a wife in Town as he would meet with more temptations to get into rascaity or meanness." [142] Embree went on to tell Marston that "if [Embree] was certain that [Peter] would go direct to [Marston's] premises and stay there until he got ready to come home and call at no other place [Embree] would be better contented for him to have [Marston's] negro woman for a wife. [Embree was] not able to buy [Peter's] wife and under present difficulties [he was] not willing to buy even if [he] was able [sic]." [143] Embree left the matter with Marston, and notified him that he would allow Peter to go to Marston's plantation "one every two weeks provided he would keep out of mischief and [Marston] would protect him in good behaviour [sic]." [144] Though these slave owners seemed to vaguely trust their slaves, the general attitude towards slaves in the early nineteenth century was not favorable. That slaves outlasted their owners in the Southern summer sun and also survive the deadly epidemics of yellow fever was troubling to slave owners.

After the Civil War, white Southerners' attitudes towards the newly freed African American population became even more hostile. African Americans survived yellow fever outbreaks that killed their former owners, who now purportedly granted African Americans deference in social circles. Mary Cornelia Wright saved a newspaper clipping in her scrapbook from this period, which was meant as a comic tidbit in the paper. The anonymous author recounted a story in which "an Indian passing up the streets of Natchez, a few days since, was asked the relative position of white man, negro, and Indian. Giving a usual 'Ugh!' he said: "Fore the war, fust cum white man, den injin, den dog, den nigger; now, cum nigger, den dog, den injin, and white man last!" [145] This fixation on social structure was also evident in the South's negative reaction to negligible amount of African American victims of yellow fever after the 1853 epidemic in New Orleans. Slaves were the lowest of the low in the social structure of New Orleans in 1853, and thus slave owners viewed slaves' resistance to yellow fever as a valuable asset at that time.

However, after the Civil War, Southern former slaveholders argued that the federal government granted African Americans special treatment, which made African Americans' resistance to yellow fever extremely frightening to the Southerners.

Yellow fever was called the "Stranger's Disease" because it particularly terrorized immigrants and other strangers to New Orleans. The Crescent City's status as a major international port during the nineteenth century attracted a large amount of immigrants and visitors, all of whom were not immune to yellow fever and thus contracted the disease if they were in New Orleans in the summer. Though immigrants had a particularly low status in New Orleans, society looked down upon slaves even more. Kenneth Kiple and Virginia King, race relations experts, recognized that though yellow fever affected unacclimated African Americans in 1853 as much as it did unacclimated whites, "unlike whites, 'Negroes, whether natives of Louisiana, or 'non-creolized,' seldom died of the fever.'" ^[146] White immigrants did not have the same luck.

Many immigrants lived in close quarters near the riverfront, which was where yellow fever usually began its epidemic course. Immigrants lived in segregated communities based on race, ethnicity, and religion. They were also buried in this manner and by socio-economic status. There were Irish Catholic cemeteries, Potter's Fields, French Catholic cemeteries, Protestant cemeteries, Jewish cemeteries, and other such interment grounds across New Orleans. ^[147] Those who belonged in the upper echelons of New Orleans' society looked down upon immigrants, African Americans, and other poorer people. Many rich individuals believed that yellow fever was a punishment from Heaven for sins committed. They viewed poverty as one of the gravest sins, and thus explained the penchant of yellow fever for working its way through the poorer classes for a time before attacking the richer parts of town. However, this was mainly due to the fact that the wealthier inhabitants of the Crescent City lived farther away from the riverfront than did the city's immigrant and African American populations.

Though immigrants and the wealthy segregated themselves, yellow fever showed no similar affinity for a specific race, nationality or religion. It ran rampant across the Crescent City, with no regard for the location or socio-economic status of its victims. Whenever there was a large enough unacclimated population in New Orleans, as there was in 1853, yellow fever seized the opportunity to unleash its fearsome power and tear apart the lives of New Orleans citizens and the commercial structure of its businesses. The 1853 yellow fever epidemic in New Orleans severely strained relations between the Creole and immigrant populations in the city, as well as between Caucasian slave owners and their African slaves.

The 1853 yellow fever epidemic in New Orleans had a significant impact on medical, political, and social thought in the city. Though the treatment of the disease did not advance much, physicians in 1853 learned which medicines were ineffective in treating yellow fever, as well as the dangers of using too much medicine. They also began to search in earnest for the cause of the disease. The issues of the domestic origin or imported origin of Yellow Jack were raised and fiercely debated. Physicians, citizens, and politicians pitted miasma theory and contagion theory against each other, and neither appeared the

Molly Iker

victor until 1900, when Dr. Walter Reed and his team of physicians discovered the mosquito vector and thus yellow fever prevention.

Disputes about the origin and cause of yellow fever developed into political debates. In the political sphere, the Louisiana Legislature created the Louisiana State Board of Health in 1855, the first permanent board of health in the country. It regulated the major political questions of quarantine and sanitation laws, as well as medicinal and burial practices within the city of New Orleans. The Louisiana State Board of Health inspired the creation of the Metropolitan Board of Health in New York City in 1866, the first effective state board in Massachusetts in 1869, and, finally, the first National Board of Health in 1879. Though the Louisiana State Board of Health ultimately failed, it was the catalyst for public health advancement in Louisiana and the United States. This ultimately enabled Dr. Walter Reed to conduct research on the mosquito vector of Yellow Jack in Cuba, and thus to eradicate (albeit provisionally) yellow fever from the Southern United States and subsequently the rest of the world.

As a result of the yellow fever epidemic of 1853, the Southern social structure became strained. Slaveholders realized that slaves were far more resistant to the ravages of yellow fever than slaveholders were themselves. However, while slaves in 1853 had some defenses against yellow fever, these were drastically reduced from those of their ancestors first brought to the United States from Africa. Immigrants were similarly downtrodden, though they had no particular resistance to yellow fever. In fact, yellow fever ravaged the immigrants of New Orleans and other Southern port towns, as they had developed no immunity to the disease and thus were particularly susceptible to it. Southern natives viewed immigrants as dangerous people who existed to commit crimes and die of yellow fever.

New Orleans' yellow fever epidemic in 1853 prompted new regulations of medical practice, as well as of the treatment of yellow fever, and raised questions of sanitation reform, public health, and quarantine in the Louisiana Legislature. The outbreak strained relations between Southern slaveholders and their slaves and free black workers, as well as between Southern natives and new immigrants to the region. The yellow fever epidemic of 1853 in New Orleans was remarkable not only for its terrifying mortality rate but also for being the catalyst of medical, political, and social change in New Orleans and the rest of the United States.

- [1] Margaret Humphreys, *Yellow Fever and the South* (Baltimore: Johns Hopkins University Press, 1999), p. 6.
- [2] Peter Wood, *Black Majority: Negroes in Colonial South Carolina from 1670 Through the Stono Rebellion*, (New York: W. W. Norton & Company, 1974), p. 90.
- [3] Humphreys, *Yellow Fever*, p. 6.
- [4] John Duffy, *Sword of Pestilence: The New Orleans Yellow Fever Epidemic of 1853* (Baton Rouge: Louisiana State University Press, 1966), p. 17.
- [5] E.D. Fenner, *History of the Epidemic Yellow Fever at New Orleans, La., in 1853* (New York: Hall, Clayton & Co., Printers, 1854), p. 15.
- [6] Jo Ann Carrigan, *The Saffron Scourge: A History of Yellow Fever in Louisiana 1796-1905* (Lafayette: Center for Louisiana Studies, 1994), p. 60.
- [7] Duffy, *Sword of Pestilence*, p. 17.
- [8] J.S. McFarlane, *The Epidemic Summer. List of Interments in all the Cemeteries of New Orleans, from the first of May to the first of November, 1853. Together with names and ages of deceased, places of nativity, causes of death, date of interment and name of cemetery in which interred. Alphabetically Arranged, to which are added a review of the Yellow Fever, its causes, etc, and an Interesting and Useful abstract of Mortuary statistics* (New Orleans: The Proprietor of the True Delta, 1853), pp. 1-67.
- [9] Stanford E. Chaillé. "The Yellow Fever, Sanitary Condition, and Vital Statistics of New Orleans, During Its Military Occupation, the Four Years 1862-5." *New Orleans Medical Journal* (July 1870). p. 4.
- [10] *Ibid.*, p. 4.
- [11] Stanford E. Chaillé. "Acclimatisation, or acquisition of immunity from yellow fever, 1880." *The New Orleans Medical And Surgical Journal* (August 1880). p. 132.
- [12] C.S. Knapp to Dr. J.S. Copes, August 21, 1853, Copes, Joseph Slemmons, Papers; 1832 – 1924, Tulane University Library, New Orleans, LA.
- [13] Mr. Amos Kent to Mrs. Abby A. Means, November 24, 1853, Kent-Amacker Family Papers, Tulane University Library, New Orleans, LA.
- [14] William P. Riddell Journal, July 31, 1853, Riddell, William P. Papers, Journal 1853-1857, Tulane University Library, New Orleans, LA.
- [15] Thomas Kelah Wharton Diary, August 2' 1853, Wharton Diaries, Louisiana State University Library, Baton Rouge, LA.
- [16] *Ibid.*, August 22, 1853.
- [17] *Ibid.*
- [18] C.S. Knapp to Dr. J.S. Copes, August 21, 1853, Copes, Joseph Slemmons, Papers; 1832 – 1924, Tulane University Library, New Orleans, LA.

Molly Iker

[19] Minutes of a Meeting of the Excelsior Lodge, J.C.C.F, No. 311, September 24, 1853, Dunlap Manuscripts Correspondence, Tulane University Library, New Orleans, LA.

[20] Ibid., p. 60.

[21] Duffy, *Sword of Pestilence*, p. 76, 84.

[22] Ibid., p. 85.

[23] Ibid., p. 101.

[24] Duffy, *Sword of Pestilence*, p.172.

[25] Alexander McIlwaine Bell, *Mosquito Soldiers: Malaria, Yellow Fever and the Course of the American Civil War* (Baton Rouge: Louisiana State University Press, 2010), pp. 4-5.

[26] "Pathology and Practice of Medicine," *The Medical Examiner, and Record of Medical Science*, 9 (1853), p. 669.

[27] William H. Holcombe, *Yellow Fever and its Homeopathic Treatment* (New York: William Radde, 1856), p. 36.

[28] Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982), p. 335.

[29] Clarissa E. Leavitt Town Diary, June 9, 1853, Clarissa E. Leavitt Town Diary, 1853, Louisiana State University Library, Baton Rouge, LA.

[30] Mr. Campbell to Dr. Joseph Slemmons Copes, August 24, 1847, Copes, Joseph Slemmons, Papers; 1832 – 1924, Tulane University Library, New Orleans, LA.

[31] Ibid.

[32] Ibid.

[33] Ibid.

[34] Ibid.

[35] Ibid.

[36] Charles W. Boothby to his mother, January 3, 1863, Boothby, (Charles W.) Papers, Louisiana State University Library, Baton Rouge, LA.

[37] D.N. Bateman and E.H. Dyson, "Quinine toxicity," National Center for Biotechnology Information. <http://www.ncbi.nlm.nih.gov/pubmed/3548270> (accessed January 26, 2012).

[38] Annie Jeter Carmouche, "The Life of Annie Jeter Carmouche" *Memoirs*, 1840-1857, pp. 7-8, [1853], Tulane University Library, New Orleans, LA.

[39] Ibid.

[40] William P. Riddell Diary, 1853-1857, September 25, 1853, Riddell (William P.) Papers, Tulane University Library, New Orleans, LA.

[41] Stanford E. Chaillé, "The Medical Colleges, the Medical Profession, and the Public," *New Orleans Medical and Surgical Journal*, 2, no. 6 (May 1874), p. 828.

[42] Stanford E. Chaillé, *The Prevention of Yellow Fever* (New Orleans, LA: L. Graham & Son, Printers, 1882), 10.

[43] Carmouche, "The Life of Annie Jeter Carmouche," p. 7.

[44] *Ibid.*, p. 7.

[45] Theodore Clapp, *Autobiographical Sketches and Recollections During a Thirty-Five Years' Residence in New Orleans* (Boston, Phillips, Sampson & Company, 1857) pp. 205-6.

[46] Marianne Edwards to Maria Edwards, May 27, 1858, Edwards (Marianne) Letters: 1855-1866, Louisiana State University, Baton Rouge, LA.

[47] Carrigan, *The Saffron Scourge*, p. 22.

[48] A. D. Crossman, "Message of the Mayoralty to the Common Council of the city of New Orleans," *New Orleans Daily Delta*, October 18, 1853, p. 5.

[49] Charles Delery, *Precis Historique de la Fievre Jaune* (New Orleans: Imprimerie Franco-Américaine, 1869), p. 2.

[50] *Ibid.*, pp. 2-4.

[51] Stanford E. Chaillé, "The Yellow Fever, Sanitary Condition, and Vital Statistics of New Orleans, During Its Military Occupation, the Four Years 1862-5." *New Orleans Medical Journal*. (July 1870), p. 23.

[52] Carrigan, *The Saffron Scourge*, p. 59.

[53] William L. Robinson, *The Diary of a Samaritan* (New York: Harper & Brothers, 1859), p. 153.

[54] Duffy, *Sword of Pestilence*, p. 74.

[55] *Ibid.*, p. 74.

[56] Fenner, *Epidemic Yellow Fever*, p. 80.

[57] Stanford E. Chaillé, "Prevention of Yellow Fever and the Quarantining of Houses to Stamp it Out," *New Orleans Medical and Surgical Journal* (May 1898), p. 5.

[58] Stanford E. Chaillé, "Yellow fever; summary of general conclusions, 1880," *Final Report of the Chairman of the Havana Yellow Fever Commission*, (New Orleans: University of Louisiana, 1880), p. 8.

[59] *Ibid.*, p. 8.

[60] Stanford E. Chaillé, "The origin, and some properties of the poison of yellow fever and of other specific spreading diseases, 1880," *New Orleans Medical and Surgical Journal* (October 1880), p. 303.

[61] *Ibid.*, p. 303.

[62] S.L. Grier, *Observations on yellow fever; and its relations to quarantine, and other hygienic measures* (New Orleans: Office of "The Creole," 1855), p. 7.

Molly Iker

[63] J. L. Riddell, Report of Dr. J.L. Riddell upon the epidemic of 1853 (New Orleans: Emile la Sere, State Printer, 1854), p. 3.

[64] Ibid., p. 3.

[65] Chaillé, "Yellow fever; summary," p. 21.

[66] Stanford E. Chaillé, "The Annual Report of 1906 to Edwin Boone Craighead, A.M., LL.D., President of the Tulane University of Louisiana, with an Address to Graduates on Two Yellow Fever Topics," (New Orleans: 1906), p. 6.

[67] Fenner, Epidemic Yellow Fever, pg. 6.

[68] Ibid., p. 150.

[69] Crossman, "Message," p. 6.

[70] William P. Hort, "Hort on Quarantine Laws," New Orleans Medical and Surgical Journal, (1845), p. 19.

[71] Fenner, Epidemic Yellow Fever, p. 76.

[72] Legislature of the State of Louisiana, Debates in the Senate: In its Session of 1853 (New Orleans: Emile la Sere, 1853), p. 72.

[73] McFarlane, The Epidemic Summer, p. v.

[74] Ibid., p. viii.

[75] Duffy, Sword of Pestilence, p. 115-120.

[76] Stanford E. Chaillé, "The Yellow Fever, Sanitary Condition, and Vital Statistics of New Orleans, During Its Military Occupation, the Four Years 1862-5." New Orleans Medical Journal (July 1870). p. 5.

[77] Ibid., p. 5.

[78] Stanford E. Chaillé, "Prevention of Yellow Fever and the Quarantining of Houses to Stamp it Out," New Orleans Medical and Surgical Journal (May 1898), p. 13.

[79] Ibid., p. 13.

[80] Ibid., p. 15.

[81] Hort, "Quarantine Laws," p. 17.

[82] S. L. Grier, Observations on yellow fever; and its relations to quarantine, and other hygienic measures (New Orleans, The Creole, 1855), p. 5.

[83] Ibid., p. 40.

[84] Stanford E. Chaillé, "The Prevention of Yellow Fever," New Orleans Medical and Surgical Journal (August 1882), p. 3-4.

[85] Chaillé, "Prevention of Yellow Fever," p. 6.

[86] Ibid., p. 6.

[87] Ibid., p. 3-4.

[88] Ibid., p. 3-4.

[89] McFarlane, *The Epidemic Summer*, p. iv.

[90] Duffy, *Sword of Pestilence*, p. 33.

[91] Ibid., p. 58.

[92] Jo Ann Carrigan, "Yellow Fever in New Orleans, 1853: Abstractions and Realities," *The Journal of Southern History*, (August 1959) vol. 25 no. 3, pp. 347-8.

[93] Ibid., p. 348.

[94] Duffy, *Sword of Pestilence*, p. 66.

[95] Ibid., pp. 74-5,

[96] Henry M. McKiven, Jr., "The Political Construction of a Natural Disaster: The Yellow Fever Epidemic of 1853," *The Journal of American History* (December 2007), vol. 94. iss. 3, p. 3.

[97] J. L. Riddell, *Report of Dr. J.L. Riddell upon the Epidemic of 1853*, (New Orleans: Emile la Sere, 1854), p. 3.

[98] Ibid., p. 3.

[99] Stanford E. Chaillé, "The Yellow Fever, Sanitary Condition, and Vital Statistics of New Orleans, During Its Military Occupation, the Four Years 1862-5." *New Orleans Medical Journal* (July 1870), pp. 5-6.

[100] Ibid., p. 23.

[101] S.M. Beamiss, *Report on yellow fever in Louisiana in 1878 and subsequently*. [Read before the State Medical Society at Shreveport, April 6th, 1883], p. 21.

[102] Ibid., p. 21.

[103] Stanford E. Chaillé, "The Prevention of Yellow Fever," *New Orleans Medical and Surgical Journal* (August 1882), p. 1.

[104] Ibid., p. 2.

[105] Ibid., p. 2.

[106] Ibid., pp. 2-3.

[107] Ibid., p. 3.

[108] Ibid., p. 3.

Molly Iker

[109] Duffy, *Sword of Pestilence*, p. 54.

[110] *Ibid.*, p. 22.

[111] McFarlane, *The Epidemic Summer*, p.v.

[112] Carrigan, *The Saffron Scourge*, p. 76.

[113] Legislature of the State of Louisiana, *The Statutes of the State of Louisiana* (New Orleans, 1855), sec. 92.

[114] *Ibid.*, sec. 94.

[115] *Ibid.*, sec. 95.

[116] *Ibid.*, sec. 103.

[117] Stanford E. Chaillé, "Prevention of Yellow Fever and the Quarantining of Houses to Stamp it Out," *New Orleans Medical and Surgical Journal* (May 1898), p. 15.

[118] Starr, *The Social Transformation of American Medicine*, p. 184-5.

[119] Humphreys, *Yellow Fever and the South*, p. 59.

[120] *Ibid.*, p. 70.

[121] *Ibid.*, p. 70.

[122] Carrigan, *The Saffron Scourge*, p. 141-165; Humphreys, *Yellow Fever and the South*, p. 115-6.

[123] Starr, *Social Transformation of American Medicine*, p. 184.

[124] Wood, *Black Majority*, p. 91.

[125] Kenneth F. Kiple and Virginia H. King, "Black Yellow Fever Immunities, Innate and Acquired, As Revealed in the American South," *Social Science History*, vol. 1 no. 4 (Summer 1977), p. 421-4.

[126] Martha Carolyn Mitchell, "Health and the Medical Profession in the Lower South, 1845-1860," *The Journal of Southern History*, vol. 10, no. 5 (November 1944), p. 436.

[127] Humphreys, *Yellow Fever and the South*, p. 164.

[128] William H. Holcombe, *The Alternative: A Separate Nationality, or The Africanization of the South* (New Orleans: The Delta Mammoth, 1860), p. 2.

[129] *Ibid.*, p. 7.

[130] *Ibid.*, p. 5.

[131] *Ibid.*, p. 6.

[132] Carrigan, *The Saffron Scourge*, p. 71.

[133] *Ibid.*, p. 71.

142 Voces Novae, Vol 3, No 1 (2012)

[134] Clarissa E. Leavitt Town Diary, January 25, 1853, Clarissa E. Leavitt Town Diary, 1853, Louisiana State University Library, Baton Rouge, LA.

[135] Ibid, May 22, 1853.

[136] Ibid, June 5, 1853.

[137] Scrapbook: Mary Cornelia Wright (1850-67), Newspaper clipping, Wright-Boyd Family Papers, Louisiana State University Library, Baton Rouge, LA.

[138] Annie Jeter Carmouche, "The Life of Annie Jeter Carmouche," Carmouche, Annie Jeter, Memoirs 1840-1857, Tulane University Library, New Orleans, LA.

[139] Lizzie Boothby to Mr. President, Boothby, Charles W. Papers, Louisiana State University Library, Baton Rouge, LA.

[140] Robert Shurlds to Joseph Slemmons Copes, June 27, 1847, Joseph S. Copes Papers, Tulane University Library, New Orleans, LA.

[141] Ibid.

[142] Joseph Embree to Mr. Henry Marston, August 10, 1861, Marston (Henry, and Family) Papers, Louisiana State University Library, Baton Rouge, LA.

[143] Ibid.

[144] Ibid.

[145] Scrapbook: Mary Cornelia Wright (1850-67), Newspaper clipping, Wright-Boyd Family Papers, Louisiana State University Library, Baton Rouge, LA.

[146] Kenneth F. Kiple and Virginia Himmelsteib King, *Another Dimension to the Black Diaspora: Diet, Disease, and Racism*, (New York: Cambridge University Press, 2002), p. 44; Donald E. Everett, "The New Orleans Yellow Fever Epidemic of 1853," *LHQ*, 33 (1950), p. 384. Quoted in Kenneth F. Kiple and Virginia Himmelsteib King, *Another Dimension to the Black Diaspora: Diet, Disease, and Racism*, (New York: Cambridge University Press, 2002), p. 44

[147] Jocelyn Cole, interview by author, New Orleans, LA, January 22, 2012.

Molly Iker