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## **Bacteria and Politics: The Application of Science to the Yellow Fever Crisis in Reconstruction New Orleans**

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Bacteria and Politics: The Application of Science to the Yellow Fever Crisis in Reconstruction  
New Orleans

A Thesis

Submitted to the Graduate Faculty of the  
University of New Orleans  
in partial fulfillment of the  
requirements for the degree of

Master of Arts  
in  
History  
Concentration in Public History

by

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## Abstract

The emergence of germ theory during the nineteenth century transformed Western medicine. By the 1870s, public health officials in the American South used germ theory to promote sanitation efforts to control public health crises, such as yellow fever epidemics. Before the discovery of mosquito transmission of yellow fever, physicians of the late nineteenth century believed the disease was spread by a highly contagious germ. Prominent medical practitioners of New Orleans, such as Confederate Army veteran Dr. Joseph Jones, used available scientific knowledge and investigation to attempt to control yellow fever during the Reconstruction period, a period rife with political and racial tension in New Orleans. This paper will analyze nineteenth century Southern medicine through the work of Dr. Joseph Jones and will argue that despite the use of cutting edge scientific methods of the era, the political challenges of the Reconstruction period shaded the public health policies in New Orleans.

Reconstruction, public health, medicine, Joseph Jones M.D., yellow fever, Civil War, science

“To Joseph Jones, M.D., professor of chemistry and clinical medicine in the Tulane University of Louisiana--a model student of medicine, always seeking, always finding, always imparting with unwearied industry new and useful knowledge to the great republic of medical science...” -Sir Benjamin Ward Richardson<sup>1</sup>

After the American Civil War, Southern states faced difficult challenges to rebuild economically and to stabilize politically. Supporters of the Confederacy continued to push back against the federal government and violence incited by white supremacists who opposed black citizenship and federal control was commonplace in Southern cities during Reconstruction. In New Orleans, Reconstruction challenges were exacerbated by frequent outbreaks of yellow fever, an ongoing problem in New Orleans since the city's colonial period. Yellow fever outbreaks caused numerous deaths throughout the latter half of the nineteenth century and continued to reach epidemic proportions during the Reconstruction period.<sup>2</sup> The nature of disease was still somewhat unknown during this period as European scientists had just proven the existence of bacteria, a discovery that had not yet become fully accepted by the American medical community. Through the transmission of European scientific discoveries, local physicians explained the agent of yellow fever as a specific, contagious germ. The eradication of the yellow fever germ became the focus of the sanitary and public health efforts in New Orleans, an effort led by prominent medical men tied into the politics of the Reconstruction South. Public

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<sup>1</sup> Alcee Fortier, *Louisiana: Comprising Sketches of Parishes, Towns, Events, Institutions, and Persons, Vol. 3*, (Century Historical Association, 1914), 767-770. London doctor Sir Benjamin Ward Richardson, acclaimed doctor of sanitation and public health, dedicated his sixth volume of published work to Joseph Jones in 1889.

<sup>2</sup> There is debate among historians as to which years constitute post-Civil War Reconstruction. Reconstruction historian Eric Foner defines Reconstruction as the period from 1863-1877. This paper will explore the Civil War period through the 1880s.

officials and physicians enacted drastic sanitary measures in an attempt to control the disease, as it was believed to be highly contagious.

Solving public health crises proved challenging for Southern physicians and public health officials, considering the political climate of the period. The notion of the South being behind or less advanced in comparison to the rest of the country has long existed within American historiography. Benjamin Trask and John Duffy, historians of Southern medicine, argue that the Civil War and subsequent violence and political strife during Reconstruction were major setbacks for Southern medicine and medical education, resulting in the hindrance of the study and prediction of yellow fever epidemics.<sup>3</sup> There is no doubt that the Civil War hurt the economies of Southern states and that Reconstruction was a period of instability.

By looking at the original source material related to Southern medical history, it is evident that during the Civil War and during Reconstruction, Southern physicians conducted extensive studies of disease using the latest scientific methods available in the Northern United States and in Europe. By analyzing the work of Joseph Jones M.D., a physician from Georgia who worked in New Orleans during the Reconstruction period specializing in the study of disease in the South, and by analyzing Southern medical publications and correspondences between physicians from the Reconstruction era, it can be argued that the latest scientific methods were indeed often incorporated into medical studies and that at least some Southern physicians were connected with the contemporary medical world outside of the South. During the nineteenth century, New Orleans became the center for medicine in the South as multiple hospitals opened as a response to the city's expanding population, a population susceptible to

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<sup>3</sup> Benjamin Trask, *Fearful Ravages: Yellow Fever in New Orleans, 1796-1905* (Lafayette: Center for Louisiana Studies, University of Louisiana at Lafayette, 2005), 59-60; John Duffy, "Sectional Conflict and Medical Education in Louisiana," *Journal of Southern History* 23 (1957), 290.



deadly yellow fever outbreaks. The medical practices and scientific knowledge of certain Southern physicians during the period challenge the notion that the South lagged behind the leading national and international medical discourses, particularly in their efforts to combat yellow fever, a major crisis in New Orleans. Local physicians applied every scientific theory available to them to solving the yellow fever problem. This paper will investigate the history of Southern medicine during the Civil War and Reconstruction through the work of Dr. Jones and will argue that access to the cutting edge scientific methods in the medical field was not the problem when it came to the inability to control yellow fever outbreaks. Despite Southern physicians having access to the latest scientific methods, Reconstruction politics shaded the medical practice and public health policies in New Orleans. Many Southern physicians, including Dr. Jones, insisted that yellow fever was brought to the region by outsiders, an idea reflective of the xenophobic attitude of white supremacists who desired to restore the social order of the Antebellum South. With rigorous quarantine measures, public health policies were as much about social control as they were about the control of disease.

### **The Yellow Fever Crisis**

Yellow fever was a massive crisis throughout the early history of New Orleans, dating back to the colonial period. Throughout the city's early history, New Orleans suffered a series of yellow fever epidemics which killed over 40,000 people during the nineteenth century; the worst epidemic in 1853 caused over 12,000 deaths.<sup>4</sup> Much was unknown about the disease, as physicians and public officials were desperate to find a solution to the deadly illness. Once germ

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<sup>4</sup>Benjamin Trask, *Fearful Ravages: Yellow Fever in New Orleans, 1796-1905* (Lafayette: Center for Louisiana Studies, University of Louisiana at Lafayette, 2005), 39.

theory became accepted within the medical community by the 1870s, it seemed like a logical explanation for the spread of yellow fever. However, the misapplication of germ theory in the late nineteenth century was nowhere more prevalent than in the case of yellow fever in the American South. After the emergence of germ theory and before the transmission of the disease was linked to the mosquito in the early twentieth century, yellow fever was believed to be a highly contagious disease transmitted through the spread of bacteria. This theory led to drastic public health and sanitation efforts to control these disease which rose to epidemic levels on multiple occasions throughout the nineteenth century. As the need for a solution to the yellow fever problem grew, Southern physicians flocked to New Orleans to study the disease. By the late nineteenth century, New Orleans had become the capital for the study of medicine and the medical practice in the South, primarily due to the city's growing population, large port, and established hospitals. By the mid-nineteenth century, Charity Hospital, founded in 1736 during the city's French colonial period, had developed a national reputation for the treatment of yellow fever and as a teaching hospital.<sup>5</sup> The busy port of New Orleans brought immigrants and sailors from Europe, the Caribbean, and South America to the city, and with them came a variety of health problems and diseases. Dozens of hospitals were built throughout the nineteenth century in New Orleans to adapt to the growing population, attracting physicians from all over the South.

Though germ theory was a temporary explanation of yellow fever during the late nineteenth century, yellow fever was a problem in New Orleans long before germ theory was part of medical and scientific discourse and the disease devastated the urban population of New Orleans throughout the nineteenth century. During this period, New Orleans was considered by

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<sup>5</sup> Trask, 14-15.

many outsiders to be a dangerous city due to yellow fever and the epidemics ensued many panics.<sup>6</sup> More people died of yellow fever in New Orleans than in any other city in the United States.<sup>7</sup> Yellow fever affected the lifestyles people lived in New Orleans; it was known as a summer illness, so the wealthy often left the city to escape the epidemics.<sup>8</sup> According to yellow fever historian Benjamin Trask, before the mosquito linkage was discovered and before the emergence of germ theory, yellow fever was believed to have been caused by unsanitary conditions that caused miasmatic gases, that when inhaled, caused yellow fever. Yellow fever was commonly associated with dock workers in New Orleans, as those working near the Mississippi River quickly became ill with yellow fever. As a result, a public health movement began in New Orleans in the early nineteenth century that stressed proper sanitation, such as a city ordinance passed in 1833 that required burial of the dead within twenty-four hours to prevent the spread of yellow fever.<sup>9</sup> Since New Orleans was the capital of the U.S. yellow fever epidemic, it soon became a respected place for the practice of medicine in the South and physicians from around the United States sought the council of New Orleans physicians regarding the causes of, treatments of, and cures for yellow fever.<sup>10</sup>

Treatments for yellow fever included ineffective remedies that only treated discomfort caused by yellow fever and often did more harm than good. Since it was believed that many medical ailments were caused by or made worse by an imbalance in the body, medical techniques such as bleeding and the use of cathartics and diuretics were common treatments for

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<sup>6</sup> Trask., 1.

<sup>7</sup> Ibid., 2.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid., 25.

<sup>10</sup> Ibid., 27.

yellow fever.<sup>11</sup> Many drugs given to patients to alleviate yellow fever symptoms were mercury-based and many patients experienced mercury poisoning.<sup>12</sup> Finally, in 1888 yellow fever was linked to the mosquito by Cuban physician Dr. Carlos Juan Finley through scientific study. The mosquito linkage remained obscure until 1900 when U.S. Army Major Walter Reed brought Finley's findings back to the United States.<sup>13</sup> After the mosquito linkage, public health measures in New Orleans changed in the early twentieth century to include the elimination of mosquitoes through pesticides and a public health campaign that encouraged residents to eliminate standing water where mosquitoes bred outside of their homes.

Prior to the mosquito linkage, the application of germ theory to yellow fever became the basis for both physicians and sanitation officials working to control the disease by the 1870s. Once germ theory became an established scientific explanation for contagious diseases, physicians easily accepted the idea of a possible yellow fever germ due to the epidemic proportions of the disease and the strong belief that yellow fever was highly contagious. Physicians were desperate to identify a germ associated with yellow fever and a solution for germ eradication. Carbolic acid was often given to patients as a treatment for yellow fever and was initially believed to eradicate the yellow fever germ.<sup>14</sup> Physicians researching the disease conducted postmortem dissections of yellow fever patients to try to identify the yellow fever germ. Since yellow fever was believed to be highly contagious, quarantine measures and other

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<sup>11</sup> Trask, 28.

<sup>12</sup> Ibid., 28.

<sup>13</sup> Ibid., 97. Although Walter Reed reported Dr. Finley's findings in the fall of 1900, the mosquito linkage was not immediately accepted by the medical community until the last U.S. epidemic of 1905 when public health measures to eliminate mosquitoes were finally enacted, (Trask, 105).

<sup>14</sup> Letter to S.E. Chaille, February 3, 1880 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

public health procedures were created by public health officials to prevent the spread of the disease. Louisiana public health officials developed procedures, tools, and instructions for ship inspection, quarantine, and fumigation, which later led to the inception of the Louisiana State Board of Health.<sup>15</sup>

### **Reconstruction Politics in New Orleans**

The use of germ theory as an explanation for the yellow fever epidemics of the post-Civil War period occurred during a politically tense and violent period of Southern history.

Reconstruction in the American South was a tumultuous transitional period that challenged every aspect of life in the South. The emancipation of slaves created a social upheaval that was not welcomed by the racist white elites at the top of the South's racial caste system. The economic and social framework of the American South was in disarray during Reconstruction, the beginning of the long struggle for racial equality in the South that would last well into the twentieth century.

The Civil War disrupted the plantation economy and labor system of the South by ending slavery and began a redefinition of the place of African Americans within society.<sup>16</sup> Although slavery began to die out throughout the South at the end of the Civil War, slaves were still being bought and sold as late as 1865.<sup>17</sup> Despite the resistance of slave owners, emancipation gave former slaves legal rights for the first time. According to Reconstruction historian Eric Foner,

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<sup>15</sup> Letter to S.E. Chaille, February 3, 1880 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>16</sup> Eric Foner, *Reconstruction: America's Unfinished Revolution, 1863-1877*, (New York: Harper Collins, 1988), 3.

<sup>17</sup> *Ibid.*, 8.

“former slaves for the first time saw the impersonal sovereignty of the law supersede the personal authority of a master.”<sup>18</sup>

The South was never one cohesive political entity. Even after secession from the Union, white yeomen of Tennessee and the Southern Appalachian Mountains differed politically from the white planter class of the plantation region. As the Civil War intensified, discontent with the Confederacy grew throughout the South among white farmers and yeomen who could no longer defend the wealthy plantation class as the sacrifices of war began to wear on family life and financial stability.<sup>19</sup> Reconstruction in the South unfolded in different ways due to different political views in different regions. New Orleans was seized by Union troops early on during the Civil War and many former Confederate supporters ended up siding with the Union. Wealthy sugar planters sided with the Union, but somehow still hoped to preserve slavery and the plantation system of labor.<sup>20</sup> Despite Union support, white elites in Louisiana did not want to give up the old order of a slave-based plantation economy.

Before the Civil War, New Orleans was the largest city in the South and also had the largest free black population in the Deep South prior to emancipation. Despite the autonomy of free blacks in New Orleans, free blacks were not allowed to vote and still lacked certain legal rights. Reconstruction meant suffrage and legal rights for male African Americans, an idea against the beliefs of most white elites of New Orleans. Although the occupied city of New Orleans remained relatively peaceful under Union rule during the Civil War, upon their return, Confederate veterans instigated violence and continued resistance to American rule. Due to the

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<sup>18</sup> Foner, 8.

<sup>19</sup> Ibid., 13.

<sup>20</sup> Ibid., 46.

clash over black suffrage, Louisiana held several hostile gubernatorial elections during the Reconstruction period. Anti-Reconstruction candidates attempted to block black votes and limit polling places during the period directly after the Civil War, marking the beginning of a violent Reconstruction period in Louisiana.<sup>21</sup> Confederate veterans groups formed militias determined to challenge Reconstruction and restore the pre-Civil War antebellum racial and social order, often by violent means.<sup>22</sup>

Between 1866 and 1877, the city of New Orleans saw five major street battles between pro-Confederacy white militia groups, police, and pro-Reconstruction Radical Republicans, which characterized the violent period of Reconstruction in New Orleans.<sup>23</sup> These battles were a continuation of war-like conditions in New Orleans, which hindered the post-Civil War recovery in New Orleans. Ex-Confederate officers formed paramilitary groups who often posed as veterans' mutual aid societies but acted as white extremists and incited racial violence.<sup>24</sup>

The Crescent City White League formed under the racist ideology of white supremacy and used violence and intimidation to gain political power. They denounced pro-Reconstruction Radical Republicans in Louisiana's government and sought to overthrow federally mandated Reconstruction. On September 14, 1874, the Crescent City White League staged an uprising in an attempt to overthrow the Reconstruction government and Republican Governor William Kellogg in New Orleans that led to a firefight between the White League and the New Orleans

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<sup>21</sup> Foner, 26-27.

<sup>22</sup> Ibid., 31.

<sup>23</sup> Ibid., 3.

<sup>24</sup> Scott Marler, *The Merchants' Capital The Merchants' Capital: New Orleans and the Political Economy of the Nineteenth-Century South* (Cambridge, 2012), 195-196.

Metropolitan Police.<sup>25</sup> The White League defeated the Metropolitan Police and seized the city for three days, but were ultimately unsuccessful when federal troops intervened.<sup>26</sup> Yellow fever outbreaks continued throughout this period of instability, which further intensified the city's challenges.

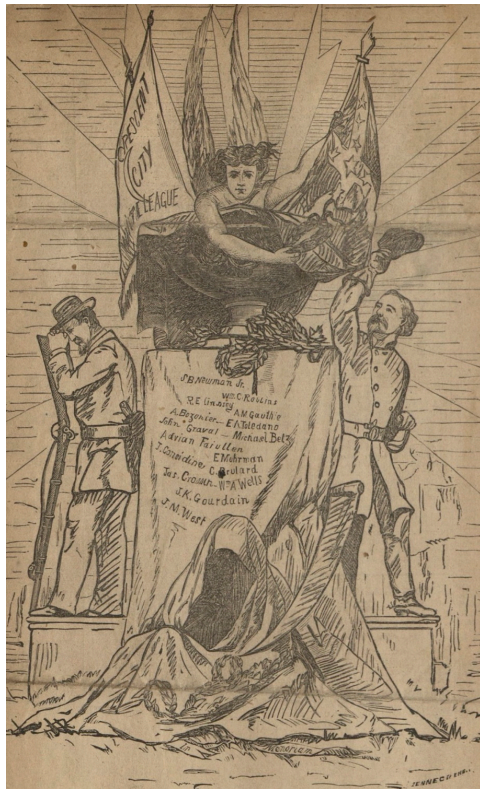


Fig. 1- A pro-White League illustration from an 1877 article in *The Daily Picayune* saved by Joseph Jones. The article commemorated the White League uprising of September 14, 1874. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

## Medicine Before and During the Civil War

Before the acceptance of germ theory, the practice of medicine in relation to the understanding of human disease went largely unchanged. Medical theories and treatments

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<sup>25</sup> James K. Hogue, *Uncivil War: Five New Orleans Street Battles and the Rise and Fall of Radical Reconstruction*, (Baton Rouge: Louisiana State University Press, 2006), 135-136.

<sup>26</sup> *Ibid.*, 142.



echoed ideas prevalent during ancient times, such as the theory that disease was caused by an imbalance in the earth's atmosphere, which in turn caused noxious gases to rise from the depths of the earth, making people sick.<sup>27</sup> During the eighteenth and nineteenth centuries, American physicians practiced medicine based primarily on empirical observations of their patients, as modern blood tests, x-rays, and laboratory-based testing were not yet available. By the late nineteenth century, technological and scientific breakthroughs began to revolutionize the way physicians and the general public understood health and medicine. Innovations such as germ theory and the discovery of the link between mosquitoes and disease were all products of mid to late nineteenth century scientific research and development that slowly but permanently changed the practice of medicine in the United States. Many historians have suggested that medicine was not scientific until after germ theory became widely accepted. For instance, historian John Duffy argued that humoral theory was the dominant explanation of disease before germ theory emerged in the latter half of the nineteenth century.<sup>28</sup> There is no doubt that germ theory transformed the practice of medicine and established a concrete scientific understanding of disease; however, historical evidence suggests that the shift from unscientific humoral theory and scientific germ theory may have been a more gradual shift.

The outbreak of the American Civil War occurred just before this major shift in medical science of the nineteenth century. Civil War historian Ira Rutkow considered pre-Civil War medicine as unscientific: "Medicine, at that time, was decidedly unscientific and riddled with the

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<sup>27</sup> John Duffy, *The Sanitarians: A History of American Public Health* (Chicago: The University of Illinois Press, 1990), 20.

<sup>28</sup> *Ibid.*, 20.

misguided notions of past thinking.”<sup>29</sup> Union troops and physicians were unprepared for the First Battle of Bull Run in 1861 and had limited medical supplies and no plans to rescue casualties, leaving the injured on battlefields for days where they would lie bleeding and suffering from infection and dehydration leading to eventual death. Military encampments during the earlier part of the Civil War were unorganized, unsanitary, and filled with disease and it was just as common for soldiers to die of stomach ailments and contagious diseases as from battle injuries. Diarrhea and dysentery were the most common ailments in the early part of the Civil War as camp conditions were unsanitary and medical scientists of the day never linked fecal contamination of food and water with outbreaks of stomach ailments; physicians often blamed these ailments on soldiers eating unripe fruit or uncooked vegetables. Malaria was also at epidemic levels during the Civil War and was believed to be caused by gaseous compounds from decaying vegetable matter in warm, wet areas as the link to the mosquito had not yet been discovered.<sup>30</sup> Scientific and medical innovations of the late nineteenth century, such as germ theory, antiseptic surgery, and the causes of disease came a little too late for soldiers of the Civil War.

Although historians such as Ira Rutkow have suggested that Civil War physicians were disconnected from the scientific method in their approach to the medical practice, historical evidence shows that science was not absent from the medical process during the Civil War. Joseph Jones M.D. studied history, etiology, pathology, and the treatment of Southern diseases throughout the latter half of the nineteenth century.<sup>31</sup> Originally from Georgia, Joseph Jones was

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<sup>29</sup> Ira M. Rutkow, *Bleeding Blue and Gray: Civil War Surgery and the Evolution of American Medicine*, (New York: Random House, 2005), xiii.

<sup>30</sup> Ibid., 13-16.

<sup>31</sup> Luana Henderson to Joseph Jones Papers Inventory, 2000, [www.lib.lsu.edu/special/findaid.0468.pdf](http://www.lib.lsu.edu/special/findaid.0468.pdf).

educated at South Carolina College and Princeton University and received his medical education from the University of Pennsylvania.<sup>32</sup> Jones taught chemistry at Savannah Medical College and at the University of Georgia before the Civil War.<sup>33</sup> Jones joined the Liberty Independent Troops during the Civil War as a private and later served as surgeon major for the Confederate States Army. After the Civil War, Jones moved to New Orleans in 1868 and became professor of chemistry and clinical medicine at the University of Louisiana and a visiting physician at Charity Hospital in New Orleans until 1894. Jones was appointed president of the Louisiana State Board of Health and served as president of the Louisiana State Medical Society.<sup>34</sup> Jones was devoted to the scientific investigation of disease and studied the nature of disease throughout his entire career as a doctor. He concentrated on diseases common to the American South, such as the common diagnosis of gangrene during the Civil War and the epidemics of yellow fever which plagued the South throughout the nineteenth century.

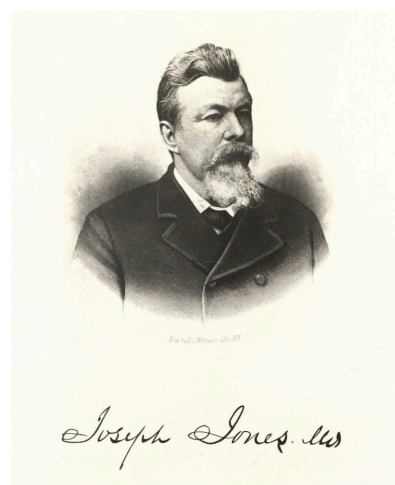


Fig. 2- Portrait of Dr. Joseph Jones, 1880. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

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<sup>32</sup> Alcee Fortier, *Louisiana: Comprising Sketches of Parishes, Towns, Events, Institutions, and Persons, Vol. 3*, (Century Historical Association, 1914), 767-770.

<sup>33</sup> Luana Henderson to Joseph Jones Papers Inventory, 2000, [www.lib.lsu.edu/special/findaid.0468.pdf](http://www.lib.lsu.edu/special/findaid.0468.pdf).

<sup>34</sup> Ibid.

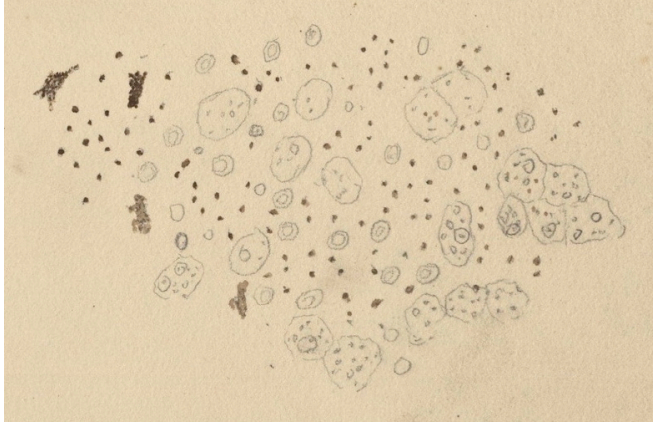


Fig. 3- Sketch of microscopic structures of malaria by Dr. Joseph Jones, 1871. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

### **Germ Theory and Medicine in the American South**

The emergence of germ theory revolutionized the understanding of disease. The laboratory work of Robert Koch and Louis Pasteur in Europe provided evidence of disease-causing microorganisms, a scientifically-proven agent of disease that could be seen under a microscope.<sup>35</sup> The acceptance of germ theory by American physicians after the Civil War was initially mixed. However, the bacteriological revolution of the late nineteenth century eventually transformed public health in the United States by introducing the idea of bacteria as an agent of disease. Concrete scientific theories such as germ theory helped to legitimize the medical practice and established that all physicians needed formal university training in order to enter the medical profession. Not only did the medical practice become more professionalized as a result of the application of concrete scientific theories such as germ theory, but according to medical historian John Duffy, “the bacteriological revolution along with other developments in medicine, immeasurably strengthened the position of the medical profession, and it also firmly ensconced

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<sup>35</sup> Susan L. Smith, “Teaching the History of Public Health and Health Reform,” *OAH Magazine of History*, Vol. 19, No. 5: 2005: 28.

physicians in charge of public health.”<sup>36</sup> Even though germ theory altered the understanding of sickness, many conservative physicians did not immediately accept the idea. An 1884 article from the *Journal of the American Medical Association* that discussed the work of German physician Robert Koch on tuberculosis bacillus expressed that Koch’s theory on the spread of tuberculosis would do more harm than good and that tuberculosis was not contagious.<sup>37</sup> Germ theory was radical idea for the period and one of the first major scientific breakthroughs of the nineteenth century that began to transform the understanding of medicine. Like any new scientific theory, it was met with scrutiny within the medical science community.

This hesitation in the American medical community to accept germ theory is also evident in Southern medical journals. Although germ theory shifted public health and sanitation reforms toward the eradication of disease-causing bacteria, some physicians still questioned the solidity of the theory. In the *New Orleans Medical and Surgical Journal*, an 1884 article about the pathological nature of bacteria stated the following conclusions:

1. That specific differences of bacteria or bacilli as belonging to different diseases have not been conclusively demonstrated. 2. That these organisms have not been found except in association, either directly or indirectly, with preexisting disease of a degenerating nature, and that therefore they have not yet been proved to be primary agents of infective disease. 3. That the probability of the origination of phthisis from germs in the atmosphere is contradicted by the immunity of large numbers of persons specifically exposed to this agency. 4. It is probably that these germs, reaching internal organs, may be the means of salutary elimination of morbid matter.<sup>38</sup>

The conclusions in this article demonstrate that some physicians did not just accept germ theory without skepticism or scientific scrutiny. While Robert Koch may have produced evidence

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<sup>36</sup> Duffy, 196.

<sup>37</sup> Ibid.

<sup>38</sup> W.B. and W.H. Resteven, “The Bacteria Question in its Pathological Relation,” *New Orleans Medical and Surgical Journal*, Vol. 11: 1884, 651. Note: the term “phthisis” referred to tuberculosis, in questioning Robert Koch’s findings on the tuberculosis bacillus.

proving the existence of bacteria, other scientific concepts related to bacteria and disease, such as the concept of disease immunity, were not yet generally understood, which led some members of the medical community to resist germ theory. In an 1882 address to the Charity Hospital Pathological Society, Dr. H.D. Schmidt dismissed Koch's findings on bacteria and stated that bacilli and germs were just fatty crystals, another act of reluctance to the acceptance of germ theory.<sup>39</sup> In a similar fashion, in an 1889 address given to the Southern Surgical and Gynecological Association, the president of the association used the miasma theory of disease in explaining the transmission of malaria: "How much is to be learned about diseases particular to this South-land of ours - this manner in which malaria affects the population; where the miasma generated; the way it modifies and alters other diseases and surgical conditions existing in the same sections; how acute attacks show themselves; in what way chronic malaria exhibits itself, and the pathological changes it brings about - all these should be studied."<sup>40</sup> The germ theory of disease or any relation between bacteria and malaria was not mentioned in this address, so the assumption is that the president of the Southern Surgical and Gynecological Association had not accepted the theory.

While some historians may have argued that alternative theories to bacteria as the cause of disease were unscientific, the very nature of science calls for the questioning of scientific ideas and theories. Members of the late nineteenth century medical community who dismissed bacteria as a disease-causing agent would have likely argued it was their duty as physicians and practitioners of a science to scrutinize popular scientific theories until they saw what they

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<sup>39</sup> John Duffy, *The Rudolph Matas History of Medicine in Louisiana*, Pelican Publishing: 2000, 336.

<sup>40</sup> Hunter McGuire, *Address of the President Before the Southern Surgical and Gynecological Association*, November 13, 1889 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

perceived to be undeniable evidence supporting the theory. The nature of science allows for scientific ideas to be tested and to be falsified. If the miasma theory of disease was proved to be incorrect, those conclusions do not disqualify the theory from being a scientific theory. In the article “Science in Medicine,” John Harley Warner explained that, “emphasizing that thinking physicians sometimes held divergent views of what was and was not science also presents a topic like the medical reception of bacteriology under a new aspect,” in reference to the argument that physicians were still using science and the scientific method even if they disputed germ theory.<sup>41</sup>

Just as germ theory was dismissed by many members of the medical community, the theory was often linked to medical conditions which were later determined to be unrelated to disease-causing bacteria. *The New Orleans Medical and Surgical Journal* published an article in 1888 entitled, “Is Cancer a Germ Disease?” The introduction of the article stated, “It has come to this. Even cancer, which pathologists long endeavored to explain without resort to bacilli or micrococci, is now having directed upon it the all-powerful light of the germ-theory of disease and is asked to deliver up its hidden germ, which has, since man began, been silently but surely at work destroying the lives of large numbers of the human race,” and that cancer was being discussed as a contagious disease caused by bacteria.<sup>42</sup> The article described several cases which involved married couples where a husband or wife developed a form of cancer and in a short period of time their spouse also developed cancer, leading to the suspicion that cancer was caused by a contagious germ. Other observations were discussed, such as the similarity between cancer and other medical conditions. “The group that cancer most resembles contains syphilis,

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<sup>41</sup> John Harley Warner, “Medicine in Science,” *OSIRIS*, 2nd series, Vol. 1, Historical Writing on American Science, The University of Chicago Press: 1985, 57.

<sup>42</sup> “Is Cancer a Germ Disease?” editorial in *The New Orleans Medical and Surgical Journal*, Vol. 40: 1888, 558.

tuberculosis, glanders, leprosy, and actinomycosis, each of which is known to have a distinct micro-parasite.”<sup>43</sup> In the case of this article, the application of a concrete scientific theory, such as germ theory, was not always an accurate application. Even though germ theory changed the approach of medical science in studying diseases, there was still much to be discovered about the nature of disease and other medical conditions like cancer. However, at the beginning of Reconstruction, germ theory was a brand new European theory not yet applied to medicine in the United States. The theory would later be used as an explanation for yellow fever and a justification for extreme measures of social control, such as strict quarantine measures.

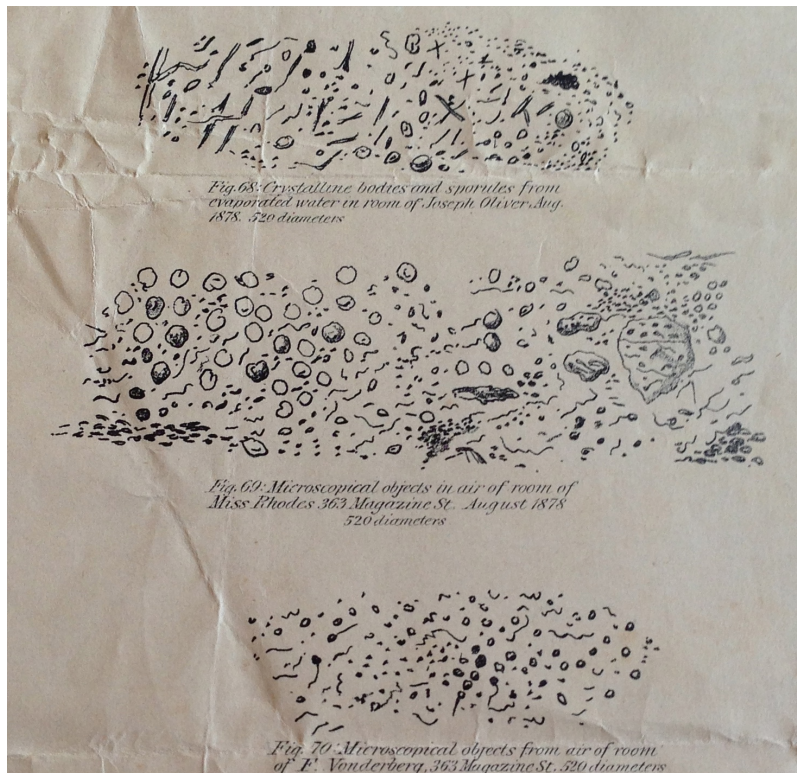


Fig. 4- Illustrations by Joseph Jones M.D. of microscopical objects found in rooms of yellow fever patients, 1878. These illustrations were published in an in depth study conducted by Jones on various diseases prevalent in New Orleans. Jones noted “microscopical objects” found near yellow fever patients as carriers of the disease. From the Joseph Jones Papers, Mss. 468, 534, et al., Louisiana and Lower Mississippi Valley Collections, LSU Libraries, Baton Rouge, LA.

<sup>43</sup> “Is Cancer a Germ Disease?” editorial in *The New Orleans Medical and Surgical Journal*, Vol. 40: 1888, 562.



## Public Health Efforts to Control Yellow Fever

By the 1870s, germ theory was becoming an accepted scientific theory by some doctors within the Southern medical community. In 1880, Joseph Jones M.D. became president of the Louisiana Board of Health and used his scientific knowledge in his new position with the Louisiana Board of Health to control yellow fever. In his report on yellow fever in New Orleans, Jones stated that “yellow fever can be excluded from New Orleans and the Mississippi Valley by a rigid and effective quarantine,” insisting that quarantine and fumigation measures would eliminate the yellow fever germ.<sup>44</sup> Since yellow fever was believed to be highly contagious, quarantines were seen as an effective means of controlling the disease, especially in the case of ships coming into New Orleans. The Louisiana Board of Health established a strict code of sanitary and quarantine guidelines for the city of New Orleans. Ships had to be fumigated with sulfurous acid gas and had to pass sanitary inspections.<sup>45</sup> The Louisiana Board of Health also developed quarantine stations in various locations along the coast for the inspection of ships and people for yellow fever, followed by a thorough cleaning and fumigation of all ships.<sup>46</sup> Quarantine periods for ships lasted anywhere from seventy-two hours to over two weeks, depending upon the board’s decision. In the case of the Mississippi Quarantine Station, a seventy-two hour quarantine period was the minimum, but some vessels were detained “nine, ten, twelve or fifteen days, for no other reason than because it was deemed imprudent for them to come to the city in less time. When a vessel with yellow fever arrived at the quarantine station she was detained there as long as the Board deemed proper. While the lives of the people of the

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<sup>44</sup> Joseph Jones, *Medical and Surgical Memoirs*, 1890 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

whole Mississippi Valley and Texas were considered, the lives also of thousands of unacclimated persons in this city had to be protected.”<sup>47</sup> Although quarantines were largely ineffective against mosquitoes, as the link between yellow fever and mosquitoes was unknown, quarantines at least kept shiploads full of sailors and passengers away from local mosquitoes who could transmit yellow fever to sailors and passengers once in port.<sup>48</sup> Great measures were taken to not only sanitize people and ships during quarantines, but cargo, including food cargo, was also subjected to disinfection. In the case of a ship called the *Excelsior* from Brazil that transported coffee to New Orleans in 1879, even the coffee was disinfected with sulphurous acid.<sup>49</sup>

In 1880, the Louisiana Board of Health reported that there were only two deaths associated with yellow fever in the city of New Orleans for the entire year.<sup>50</sup> The board’s report from 1880 made it known that only two deaths was remarkable since yellow fever still prevailed in Rio de Janeiro and Havana, and the report gave the credit to the Louisiana Board of Health’s sanitation and quarantine regulations and efforts, under the direction of Dr. Jones. It is clear that a considerable amount of state government resources were invested in the task of sanitation in New Orleans in order to control yellow fever epidemics, mainly due to the theory that yellow fever was connected to a specific germ. After the mosquito linkage was discovered and accepted by the medical community and by health boards responsible for sanitation laws, the task of

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<sup>47</sup> Joseph Jones, *Medical and Surgical Memoirs*, 1890 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>48</sup> J.R. McNeill, *Mosquito Empires: Ecology and War in the Great Caribbean, 1620-1914*. Cambridge University Press: 2010, 79.

<sup>49</sup> *Report of the Board of Health of Louisiana, 1880*, in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>50</sup> *Ibid.*

controlling yellow fever shifted away from quarantines and fumigation for bacteria and toward the eradication of mosquitoes, ending yellow fever epidemics shortly into the twentieth century.

### **Dr. Joseph Jones and Medical Science during the Civil War**

Before his rise to prominence in public health in New Orleans, Dr. Joseph Jones put his knowledge of the scientific method to the test in an effort to solve health crises of Southern Civil War encampments as a young physician. In late summer of 1864, during the Civil War, Dr. Joseph Jones was sent to study the diseases of federal prisoners at Camp Sumter, known as Andersonville Prison in Andersonville, Georgia.<sup>51</sup> There Jones worked with Dr. Isaiah White, who served as Chief Surgeon at Camp Sumter.<sup>52</sup> In a sanitary report written prior to Jones' arrival, Dr. Isaiah White's description of conditions at Camp Sumter is reflective of pre-germ theory medical ideas. In reference to the camp's geographical location, White explained, "the location is elevated and well drained, the soil is sandy, without vegetable mould or other cryptogamous growth likely to engender malaria."<sup>53</sup> It was commonly believed that decaying vegetable matter was the cause of diseases such as malaria before the actual causes of these diseases were scientifically proven. White also gave a detailed description of the camp's poor sanitary conditions and inadequate drainage system, but linked the frequent cases of diarrhea and dysentery to scurvy and poor diet among the prisoners.<sup>54</sup>

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<sup>51</sup> Moore to Dr. Isaiah White, 6 of August, 1864 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>52</sup> Ibid.

<sup>53</sup> Sanitary Report of Camp Sumter, Andersonville, GA, by Dr. Isaiah White, 25 of April, 1864 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>54</sup> Ibid.

One of Dr. Jones' first studies at Camp Sumter was an investigation of hospital gangrene and typhoid fever, which were prevalent diseases in the camp. Jones wrote a detailed proposal of study to fully investigate the link between climate and soil to disease and to determine the causes of gangrene and various fevers. In the report, Jones used scientific language such as, "in the prosecution of these inquiries, the inductive method has been followed; the phenomena and individual facts have been observed and recorded, and general principles established by the analysis, comparison, classification and combination of the facts and phenomena."<sup>55</sup> Jones questioned the linkage between climate and soil to the spread of disease in this study, despite the dominant theory that disease was caused by miasmas associated with soil and decaying vegetable matter. In the proposal of study, Jones described a detailed plan of study with various questions related to hospital gangrene. Jones questioned if gangrene is contagious and stated, "it is difficult to settle the question of contagion, and it is still more difficult to define its laws," acknowledging that much was still unknown about disease.<sup>56</sup> Jones further questioned the unknown contagious nature of hospital gangrene, "how is it transmitted, through the atmosphere, or by direct contact and inoculation?"<sup>57</sup> Jones seemed to be hinting at the idea that disease transmission may be related to something more complex than through inhaling miasmas. On the topic of transmission of gangrene through inoculation, Jones questioned if gangrene was spread through the "inoculation of gangrenous matter."<sup>58</sup> The "gangrenous matter" Jones described suggests that he believed that another substance specific to gangrene could possibly be

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<sup>55</sup> Letter from Dr. Joseph Jones to Dr. S.E. Chaille, October 1864, in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA, 1-2.

<sup>56</sup> Ibid., 7.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid., 1-2.

responsible for the transmission of the disease. In his report on his observations and findings on diseases at Camp Sumter, Dr. Joseph Jones concluded that climate and soil were unrelated to the transmission of disease in the camp.<sup>59</sup> Jones' study negates the idea that medicine before germ theory was solely based on humoral theory as the hypotheses and conclusions of Jones suggest the existence of another agent as the cause of disease.



Fig. 5- A young Dr. Jones during the Civil War. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

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<sup>59</sup> Joseph Jones, *Investigation Upon the Diseases of the Federal Prisoners Confined at Camp Sumter, Andersonville Ga.*, March-September 1864, Vol. I in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.



Fig. 6- Postmortem dissection kit used by Joseph Jones M.D. during the Civil War. Courtesy of the Louisiana State Museum.

A report published by the United States Sanitary Commission on Civil War camp diseases described the conditions at Camp Sumter in Andersonville, Georgia as unacceptable. The report referenced the filthy conditions of the camp, “the air of the tents was foul and disagreeable in the extreme, and in fact the entire grounds emitted a most nauseous and disgusting smell.”<sup>60</sup> The report gave an extensive description of the camp’s unsanitary conditions, such as dirty rags being used to dress wounds, gangrenous wounds filled with maggots, improper disposal of the dead, and wooden boxes filled with excrement in close proximity to living quarters and food preparation areas.<sup>61</sup> In analyzing the conditions of the camp, it is easy to see why Dr. Jones

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<sup>60</sup> Austin Flint, *Contributions Relating to the Causation and Prevention of Disease, and to Camp Diseases; Together with a Report of the Diseases, etc., Among the Prisoners at Andersonville, GA*, United States Sanitary Commission, 1867, in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>61</sup> Ibid.

wanted to carry out a systematic effort of medical investigation to solve the problem of disease in military camps. Not only would an organized medical study make sense out of the chaotic situation that defined Civil War encampments, but an understanding of disease would benefit the war effort by providing healthier troops and fewer dead soldiers. On both the Union and Confederate sides of the war, camp and hospital conditions led to more deaths than battle injuries. According to historian Courtney Robert Hall, in the Army of Northern Virginia, each man contracted an average of three reported illnesses.<sup>62</sup> It was in the interest of the war effort to understand the treatment and prevention of these illnesses to ensure a formidable army, hence the effort carried out by physicians such as Dr. Jones. Though Jones did not yet understand the concept of bacteria during the Civil War, he was seeking to understand what was making prisoners and soldiers at Camp Sumter sick and hypothesized that the agents of disease were beyond the medical and scientific discourse of the time. Jones would later use his scientific talents as a powerful political tool.

### **The Politics of Dr. Jones**

After the close of the Civil War, the city government of New Orleans was overwhelmingly Confederate; 88 percent of Conservative candidates for city council were former Confederate soldiers or officeholders and Confederate veterans took charge of New Orleans city government by 1866.<sup>63</sup> Dr. Joseph Jones was a prominent Confederate veteran and was actively involved in Confederate veteran groups throughout his life in New Orleans. He was

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<sup>62</sup> Courtney Robert Hall, "The Influence of the Medical Department Upon Confederate War Operations," *The Journal of the American Military History Foundation*, Vol. 1, No. 2: 1937, 52.

<sup>63</sup> Hogue, 33-34.

a well-respected within both the medical community and Confederate veterans groups, which likely helped his status in the medical community after he moved to New Orleans in 1868. In addition to keeping detailed journals related to his medical studies, Dr. Joseph Jones kept record of Southern political events and saved numerous newspaper clippings related to the White League uprising of 1874. Since Jones was a proud Confederate veteran, he likely sympathized with his fellow veterans in the White League. Among the newspaper articles collected by Jones was an article commemorating the 1874 uprising that described the White League as “the world renowned Crescent City White League under the splendid leadership of Gen. Frederick N. Ogden.”<sup>64</sup> The article was overwhelmingly positive about the White League and described the federal government as the oppressors of Louisiana. Jones collected many articles that favored opposition of Reconstruction in the South. Jones also kept an article entitled, “Should the People of the Southern States Ask of the General Government Compensation for Their Emancipated Slaves?”<sup>65</sup> This article reflected an attitude popular among anti-Reconstruction advocates, that slave owners should have been compensated by the federal government for their slaves after emancipation.<sup>66</sup> From examining Jones’ collection of articles, it is clear that his opinions aligned with the anti-Reconstruction movement in Louisiana and his prominence as a Confederate doctor likely helped him gain political power in the medical community of New Orleans. This political power allowed Jones to become one of the leading physicians in the effort to solve the yellow fever crisis of New Orleans. If the violence in New Orleans was a continuation of warlike

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<sup>64</sup> “The White League,” *The Daily Picayune*, September 14, 1877. Collection 172, Louisiana Research Collection, Tulane University.

<sup>65</sup> “Should the People of the Southern States Ask of the General Government Compensation for Their Emancipated Slaves?” Newspaper clipping. Collection 172, Louisiana Research Collection, Tulane University.

<sup>66</sup> Foner, 46.



conditions after the Civil War, then the public health crisis of yellow fever added to the continuation of war-like conditions in New Orleans.

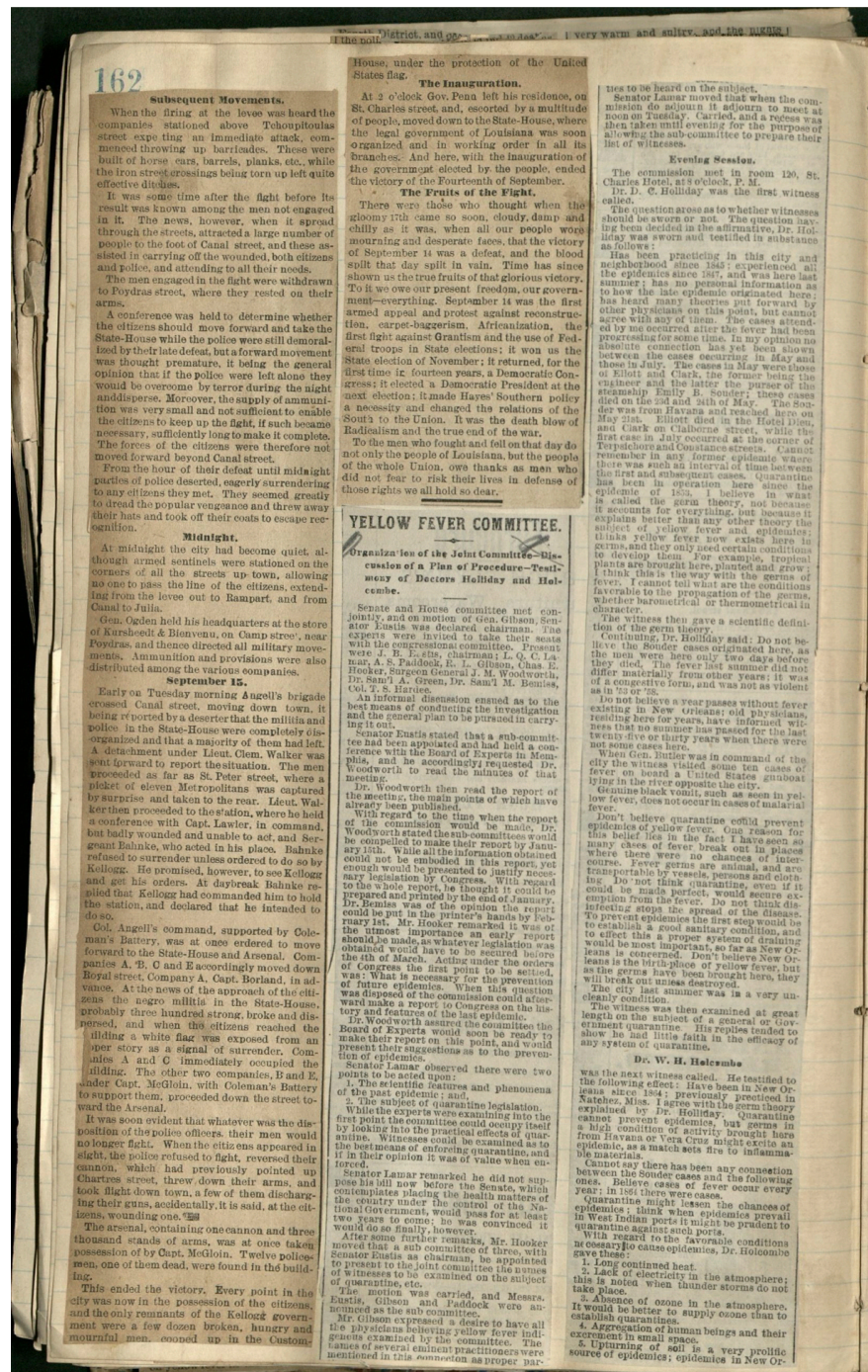


Fig. 7- Newspaper clippings of political and medical articles saved by Joseph Jones M.D. Jones kept volumes of scrapbooks featuring newspaper clippings related to medicine, politics, and history. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

## **The Influence of Reconstruction Politics on Public Health Policies**

Dr. Joseph Jones was among the physicians researching yellow fever in New Orleans through postmortem dissection. Jones performed microscopical and chemical analyses of the blood of yellow fever patients and placed special emphasis on examining kidney tissue, since kidneys were often the first of the major organs to fail in yellow fever patients.<sup>67</sup> Jones became highly specialized in the study of yellow fever after coming to New Orleans in 1868 through postmortem observation and research. Jones insisted yellow fever was in no way indigenous to Louisiana throughout his research. The source of yellow fever was heavily debated amongst the medical community. In New Orleans, as in other Southern cities, local physicians made a point to write that yellow fever was not an indigenous disease in their community or geographic location and that the disease was brought by outsiders. Since yellow fever was more common in warmer climates near water where the mosquito populations were high, public health officials tied the disease to the maritime industry and believed that yellow fever was brought to Southern cities by ships. Separate reports on yellow fever in both New Orleans and Savannah, Georgia, it was stated that yellow fever was not indigenous to either city. The report on yellow fever in Savannah stated that, “the germs specific to yellow fever I believe to be always imported. The history of no epidemic of this character seems ever complete, in this country, without the inevitable mention of a ship from an infected port.”<sup>68</sup> A report on yellow fever in New Orleans written by Dr. Jones explicitly stated that yellow fever was not indigenous to New Orleans,

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<sup>67</sup> Letter from Dr. Joseph Jones, February 16, 1889 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>68</sup> “Report on Yellow Fever, as it appeared in Savannah, Georgia, 1876,” *New York Medical Journal*, March 1877 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

Louisiana, or to the Mississippi Valley.<sup>69</sup> Physicians and public health officials saw yellow fever as an outsider's disease and blamed immigrants from foreign locales for bringing the disease to the United States, reflective of discriminatory attitudes toward immigrant groups of the nineteenth century. Since sanitation was believed to be the best way to control yellow fever, immigrants believed to be the carriers of the disease were viewed by officials as unsanitary, indicative of ethnic and class relations of nineteenth century New Orleans.

These immigrant groups were subject to medical profiling, a concept defined by anthropologist Charles L. Briggs as "a dichotomy within the body politic between sanitary citizens, who are expected to obey the laws and cooperate with authorities to control epidemics, and unsanitary subjects, who are not open to modernity and are likely uncooperative patients. By choosing the path of resistance, the unsanitary subjects relieve the government from any obligation to invest in their health."<sup>70</sup> Medical profiling and viewing immigrants as unsanitary allowed for a blame to be placed and further explanation, favorable to white physicians, aristocrats, and city officials, of the origins of yellow fever. Since Jones was a prominent Confederate veteran who sympathized with anti-Reconstruction ideology, blaming the spread of the disease on immigrants viewed as non-white may have been an acceptable explanation. Once a case of yellow fever was reported in a Southern city, it was believed that the warm, humid climate of the South allowed for the disease to spread, as in the case of the report on yellow fever in Savannah, "it seems impossible to find yellow fever disassociated from intense heat, superabundant moisture, and general filth. These are the conditions peculiarly favorable upon

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<sup>69</sup> Joseph Jones, *Medical and Surgical Memoirs*, 1890 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>70</sup> Kalala Ngalamulume, "Keeping the City Totally Clean: Yellow Fever and the Politics of Prevention in Colonial Saint Louis du Senegal, 1850-1914," *The Journal of African History*, Vol. 45, No. 2: 2004, 188.

our coast for its reception and diffusion. The more intimately the facts become known relative to the source and spread of yellow fever in Savannah during the past season of 1876, the more firmly will the doctrine of its exotic origin become established.”<sup>71</sup>

When Dr. Jones became president of the Louisiana Board of Health, he enacted rigorous quarantine measures to control yellow fever. His tenure as president of the state board of health was rife with public health political problems as Jones often clashed with outside authorities. In the true spirit of anti-Reconstruction politics, Jones wanted control over quarantine regulations in Louisiana, without the interference of the federal government’s National Board of Health.<sup>72</sup> Jones was against Gulf quarantine stations because he believed they interfered with state’s rights, indicating that his political views were influential to his public health policies.<sup>73</sup> Along with his extensive training and medical knowledge, Jones’ background as a Confederate veteran and champion of the traditional South helped him work his way up to top of Louisiana’s public health. He kept detailed records of political events happening during the period, including the violent uprisings of the White League. Jones kept newspaper clippings of Southern events mixed in with clippings related to medical matters, including an article in support of former slave owners being reimbursed by the federal government for property lost after the abolition of slavery.<sup>74</sup> As with most areas of public policy, public health was interconnected to the political climate of the period and region, which was made obvious by the decisions of Dr. Jones.

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<sup>71</sup> “Report on Yellow Fever, as it appeared in Savannah, Georgia, 1876,” *New York Medical Journal*, March 1877 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

<sup>72</sup> Trask, 90.

<sup>73</sup> Ibid.

<sup>74</sup> “Should the People of the Southern States Ask of the General Government Compensation for their Emancipated Slaves?” *The Daily Picayune*, October 15, 1877 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.



Jones was also a physician trained outside of the South, despite his devotion the Southern life. He was well connected to physicians around the country and physicians outside of the United States. Jones subscribed to national medical journals and corresponded regularly with other physicians. Jones' connection to the broader national medical community exposed him to the contemporary scientific ideas of the period, such as germ theory. He may have been a political proponent of Southern rights, but he was hardly an insular Southern doctor. Jones had his own political agenda and wanted power; he used both his political clout as a white Confederate veteran and his influence and connectedness within the medical community to become a powerful player in the sphere of Southern public health and medicine.

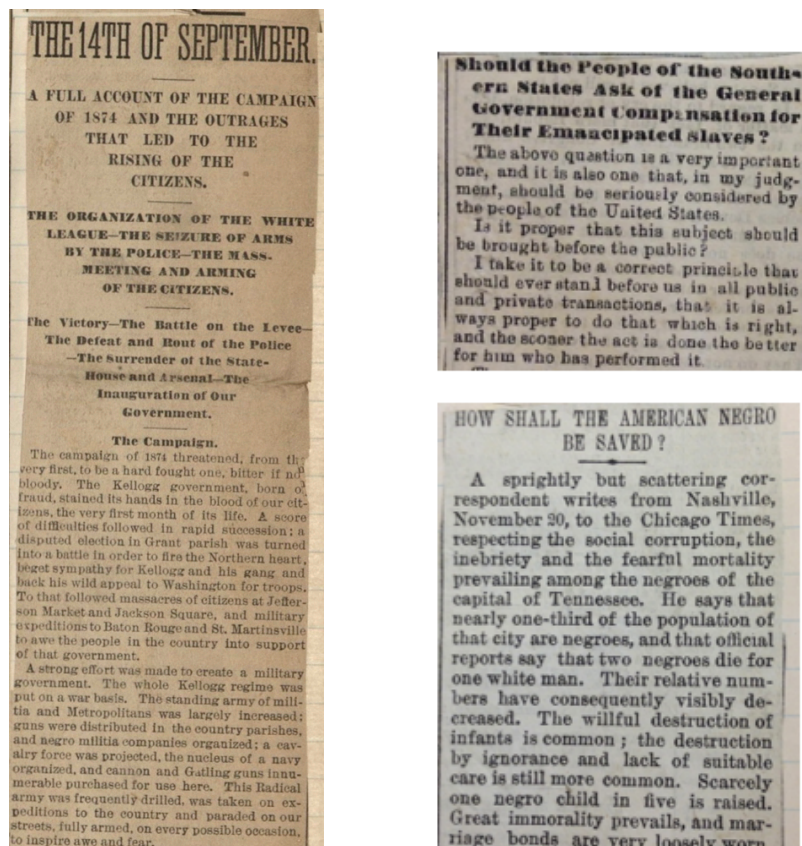


Fig. 6- Newspaper clippings saved by Joseph Jones M.D. show his political and racial sentiments. From the Joseph Jones Papers, Louisiana Research Collection, Tulane University.

## Conclusion

Through examining the work of southern physicians who practiced in New Orleans during the Reconstruction years, this paper argues that the history of science and medicine is tied to broader historical events of the nineteenth century, such as the Civil War, the growth of Southern cities such as New Orleans during Reconstruction, and the epidemics of yellow fever. Doctors used science to understand disease in the context of wars and regional health problems such as yellow fever, by conducting systematic studies of disease.

Medical science of the nineteenth century was transformed by new scientific developments from Europe. The outmoded idea of miasmas as the agents of disease gave way to bacteria as the agent of disease, an idea that could be proved through a microscope. Even after germ theory was accepted by the medical community in the United States, some physicians were reluctant to let go of the miasma theory of disease and merged miasmas with germ theory. In an 1876 Southern medical publication, the spread of yellow fever was explained by “the proliferation and diffusion of miasmatic germs,” a statement reflective of the adaptation of germ theory to already existing ideas of the spread of disease from the earlier half of the nineteenth century.<sup>75</sup> Although the source of miasmas may have come from humoral theory and folk medicine ideas, physicians such as Joseph Jones suspected that other agents were at work that caused the spread of disease. Jones’ scientific investigations of disease during the Civil War were precursory ideas to germ theory. His medical problem solving skills of scientific investigation carried over into his post-military career of trying to solve broader regional public health crises.

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<sup>75</sup> Report on the Yellow Fever Epidemic, State Board of Health, Georgia, 1876 in Joseph Jones Collection, 172, Louisiana Research Collection, Tulane University, New Orleans, LA.

The work of Dr. Joseph Jones counters the arguments of historians John Duffy and Benjamin Trask, that the events of the Civil War and Reconstruction were setbacks for the understanding and investigation of yellow fever. Dr. Joseph Jones's experience during the Civil War researching the nature of disease prevalent in Civil War encampments carried over into his studies of diseases such as yellow fever. His knowledge was on par with leading medical ideas of the era and his methods and ideas were not lagging behind.

Even though he was respected in the broader medical community outside of the South, Dr. Jones, a Confederate veteran, was still a supporter of white Southern ideals of the period. His experience points out that the politics of the Reconstruction era were a significant factor in public health policy and the application of science to medicine in the Reconstruction South. The events of Reconstruction may have exacerbated the warlike conditions of post-Civil War New Orleans, but the political environment of the postwar period helped Dr. Joseph Jones to become a key figure of public health in Louisiana. Jones may have been respected in the medical community across regional lines, however, his Southern white elite ideology clouded some of his scientific thinking, particularly in the case of his insistence that yellow fever was a disease brought to New Orleans by foreigners. Dr. Jones' used science to justify drastic quarantine initiatives, which also served as a form of social control bolstered by science. Public health measures as social control supported by scientific theories would continue in New Orleans under Jim Crow, as city and state officials maintained governance based on racist ideologies.

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## Vita

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