Yellow Fever
and Public Health
in the New South
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Yellow Fever & Public Health in the New South

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For ELAINE, JOHN, and SUZANNE
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Contents

List of Tables and Illustrations ix
Preface xi
1 Beginnings of the Public Health Movement 1
2 The Necropolitan South 14
3 The Epidemic of 1878 37
4 The Quest for National Health Legislation 60
5 The New Orleans Sanitary Association 83
6 Tales of Romance from Memphis 105
7 The Sanitary Question in Atlanta 125
8 Public Health in the New South 146
Notes 169
Index 225
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Tables

1. Populations of New Orleans, Memphis, and Atlanta, 1830–1870 18
2. Populations of New Orleans, Memphis, and Atlanta, 1870–1900 158
3. Mortality Rates for New Orleans, Memphis, and Atlanta, 1880–1889 162
4. Mortality Rates for New Orleans, Memphis, and Atlanta, 1890–1895 164

Illustrations

The organized collection of supplies, New York City. 46
Appeal to an overworked physician, Memphis. 49
Victims awaiting burial, Memphis. 49
Departure from St. Louis of the National Relief Boat. 55
"Plague-stricken—awaiting the frost." 55
Children at St. Vincent’s Infant Asylum, New Orleans. 58
Another “federal interference.” 81
Examining the credentials of railroad passengers. 109
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Preface

Today, in a setting of rapid cultural deterioration, political decadence, and economic instability, the American people confront a terrible disease in AIDS, a destroyer, not yet fully understood, from which the fullness of suffering and death is still ahead. In the early 1870s the southerner who lived in the lower Mississippi Valley, especially in cities and towns, had a similar kind of experience and prospect. There was much suffering and death in 1878, but thirty years later the great danger of yellow fever was past. This book about a time in the life of the South is offered modestly for whatever glimmer of understanding and insight it may hold.

After reading Todd L. Savitt and James Harvey Young, eds., Disease and Distinctiveness in the American South (Knoxville, Tenn., 1988) in the spring of 1989, I was inspired to dig the cardboard boxes and shopping bags containing old notes and tattered, discolored drafts out of the basement and to try, one last time, to assemble a manuscript. To the editors of and contributors to that fine addition to the literature of southern medical history, I can only say that you moved me, for good or ill, to complete a piece of business in my life that was long unfinished, and for that I am truly grateful to you.

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Beginnings of the Public Health Movement

The public health movement in the South originated in the aftermath of the lower Mississippi Valley yellow fever epidemic in 1878, one of the worst disasters in American history. This study will assess the movement's early development during the period 1878–88 by focusing on the responses of New Orleans, Memphis, and Atlanta to the crisis of the epidemic and to the ensuing denunciation of southern cities in the national press as dens of filth, pestilence, and death. The movement was distinctive in ways peculiar to the region and to the cities. Each city represents a particular era in southern history—the Anglo-French struggle for empire, the day of the land speculator and river flatboat, and the advent of the railroad—and the response of each was unique. Led by businessmen and physicians, the public health movement sought to reduce the economic and social costs of the South's long-standing reputation for sickliness and high mortality through sanitary reform, thereby ushering in a new era of health, prosperity, and progress. For guidance in their endeavors, the southerners looked to the earlier experiences of sanitarians in the North and in England, a crucial development in itself.

The sanitary campaign of the nineteenth century, the forerunner of the modern public health movement, followed the rise of an urban industrial economy. "The transformation of society by the industrial revolution," writes John Duffy, "compounded virtually every urban social problem." In England, where the movement began, London, Liverpool, and Bristol grew rapidly between 1800 and 1830. But the rise of the inland factory cities—Birmingham, Manchester, Sheffield, and Leeds—was even more spectacular. "By the early 1830's," notes a British labor historian, "seven Manchester cotton firms each employed more than 1,000 workers, a further thirty more than 500 and forty-six more between 200 and 499." According to George Rosen, the Poor Law Amendment Act of 1834 served its immediately intended purpose of reducing the poor rates, yet it also directed an ever-increasing flow of population from rural areas to the factory
towns and port cities. Then in the 1840s, with the English cities already overwhelmed by growth, thousands of starving Irish fled their famine-stricken homeland to compete with native migrants for employment and for housing in the cities' crowded cellars and tenements.

The initial response of large numbers of the well-to-do and middle classes to the social transformation of their cities was to retreat to the suburban periphery or to nearby rural settings, thus abandoning the increasingly congested districts to become working-class slums. One observer, describing Manchester in 1832, noted the residence of a few wealthy families in midcity, "but the opulent merchants chiefly reside in the country, and even the superior servants of their establishments inhabit the suburban townships. Manchester, properly so called, is chiefly inhabited by shopkeepers and the labouring classes." In a report to the House of Lords in the early 1840s, a committee of medical men said of Birmingham that "the more opulent inhabitants reside in the surrounding country; comparatively few live in the town." More families in easy circumstances lived within Sheffield and Leeds, yet even there the neighborhoods of the well-to-do were distinctly segregated from the quarters of the working poor. But in Manchester, "at the very moment when the engines are stopped, and the counting-houses closed, everything which was the thought—the authority—the impulsive force—the moral order of this immense industrial combination, flies from town, and disappears in an instant."

In the working-class districts, whole families—men, women, and children—working for pittances in the workshops, foundries, and cotton and woollen mills and living at the margin of existence, crowded into single rooms and slept as many as five to a bed. A newspaper correspondent noted in 1849 that thirty thousand of Birmingham's poorest lived in about two thousand congested, disease-breeding courts. Sanitary provisions were correspondingly meager. Numerous families might share a single privy or, lacking that, a "necessary" tub. Waste from overflowing privies and cesspools saturated the soil and seeped into cisterns and wells, contaminating the only sources of water. Tenement courtyards, streets, and alleyways served as depositories of household slops, accumulations of animal dung, and the offal of markets, butcher shops, and saloons. Under such squalid conditions, the teeming slums of Birmingham and Manchester, like the waterfront districts of Liverpool and Bristol, became hotbeds of infectious disease. Health conditions in the workplace were bad also, especially for women and children. Consequently, during
the 1830s and 1840s the death rates in cities shot upward, and that in Birmingham almost doubled.9

In general, city residents of the comfortable classes took a complacent view of disease in the slums, regarding it as a just requital for the alleged immorality and viciousness of the working poor. Any risk to themselves seemed to be minimized by physical and social distances. This outlook was severely shaken, however, by epidemics of Asiatic cholera in 1831–32, which paralyzed the cities and disrupted manufacturing and trade. The inhabitants of the crowded dock districts and industrial neighborhoods bore the brunt of suffering and misery, but cholera also claimed victims among those of social standing and moral habits. The importance of the cholera epidemics for the beginning of the sanitary movement can hardly be exaggerated. More than any other events, they eventually brought thoughtful members of the upper and middle classes to the conviction that sickness and festering conditions in the slums threatened their own lives as well as those of their families and friends.10

Believing that administrative precision was necessarily based upon exact statistical evidence, the English disciples of Jeremy Bentham, the prophet of utilitarianism, instituted registration of vital statistics in 1831.11 Then, by applying “political arithmetic” to morbidity and mortality rates, they concluded that disease itself was a major cause of pauperism, which was in turn related to the evils of vice and crime. Since sickness and premature death increased the number of a community’s widows, orphans, and other dependent persons, it seemed clear that one cost of a high death rate was a high tax rate. Seeking further to refine their analyses and to determine precisely the costs of ill health, the statisticians assigned numerical values to human life and activity. Such factors as days of productive labor lost to sickness, costs of medical and nursing attention, and the expenses of burials were figured into the complex equations. The result of these calculations seemed to indicate that excessive mortality rates were a form of preventable loss that acted as a drag on industry and commerce and retarded a community’s prosperity. Thus, one of the most powerful ideas of the sanitary movement was the belief that “health is wealth.”12

There is good reason to question the standard interpretation of the movement, which holds that physicians and the medical profession generally played a secondary role.13 It is true that throughout most of the nineteenth century the medical profession engaged in bitter internal disputes over three partially erroneous theories of disease causation. Contagionists adhered to the position that infections and
epidemics were caused by specific disease entities, or contagia. Anti-contagionists attributed epidemics of infectious disease to miasma, an infected state of the atmosphere that induced disease through human respiration. Adherents of this position believed that foul, noxious “emanations” from decaying organic matter combined with certain atmospheric conditions to produce the deadly miasma. Contingent-contagionists took the eclectic view that the operations of either specific or nonspecific agents of infectious disease were contingent upon their relation to atmospheric, environmental, and social conditions.¹⁴

Therefore, according to the standard view, physicians were able to contribute little tangible knowledge to health problems, and medicine’s role in the public health movement remained secondary. The pioneering studies of health conditions in the cities, forerunners of the sanitary survey, however, were the work of physicians. C. Turner Thackrah of Leeds, in *The Effects of Arts, Trades and Professions and of Civic States and Habits of Living on Health and Longevity* (1831), and James Philips Kay, in *The Moral and Physical Condition of the Working Classes of Manchester* (1832), exposed the stark wretchedness of working and living conditions associated with high mortality rates. Southwood Smith, physician and Benthamite, was the moving spirit behind the organization of the Health of Towns Association. Young William Farr, who would have an enormous influence on medicine in Victorian society, expressed his belief in the mid-1830s that the medical profession was witnessing the dawn of a new age. "There is, in short," he wrote, "a general movement in the profession. Medical men live less for themselves, and more for mankind."¹⁵ The movement in various communities, according to G. Kitson Clark, “suggests the importance of the influence of the local medical men.”¹⁶

The outstanding figure in the English sanitary movement, Edwin Chadwick, was a zealous Benthamite crusader for administrative reform in government and in social policy.¹⁷ While serving on the Poor Law Commission in the 1830s, he instigated and largely directed a study of health conditions among the working classes of England and Wales. The result was the commission’s massive *Report on an Inquiry into the Sanitary Condition of the Labouring Population of Great Britain* (1842). This document, a landmark in the history of the public health movement, set forth an interpretation of data drawn from the anti-contagionist theory of disease causation to which Chadwick personally subscribed. It showed an essential relation between disease, mortality, and bad sanitary conditions: poor drainage and pollution
of the soil by human waste, inadequate and contaminated water supplies, and accumulations of filth and debris in courtyards, alleyways, and streets. In one portion of the report Chadwick emphasized the preventive value of sanitary reform, insisting that "drainage, street and house cleansing by means of supplies of water and improved sewerage, and especially the introduction of cheaper and more efficient modes of removing all noxious refuse from the towns, are operations for which aid must be sought from the science of the Civil Engineer, not from the physician, who has done his work when he has pointed out the disease that results from the neglect of proper administrative measures, and has alleviated the sufferings of the victims." Carried out under the administrative authority of boards of health, these basic measures would result in savings, greater capital formation and economic growth, and the prosperity of cities and nation. The gospel of public health elaborated in Chadwick's principles inspired sanitarians throughout the nineteenth century.

Meanwhile, social deterioration in the cities marked by poverty, overcrowding, crime, disease, and rising mortality aroused further the apprehensions of the upper classes. The revelations of a parliamentary Select Committee on the Health of Towns and the subsequent report of a royal commission headed by Sir Robert Peel led directly to the formation of several voluntary associations that addressed themselves to social problems. Among these, one of the most important was the Health of Towns Association organized in 1844. Its leadership included titled nobility and men of wealth, but the rank and file was drawn from members of middle-class business and professional occupations: merchants, bankers, lawyers, physicians, and clergymen. These sanitarians, as they came to be called, waged a vigorous campaign to educate and enlist public opinion in obtaining health reform legislation. Their initial endeavors, however, encountered the opposition of vested interests and met with discouraging results.

Then, when a horde of sick and starving Irish famine refugees descended on Liverpool in 1846, the emergency brought enactment of the realm's first comprehensive health law, the Liverpool Sanitary Act. The sponsoring Health of Towns Association subsequently intensified its efforts, appealing to the English working class to demand further action from Parliament. This campaign, together with news of devastating cholera epidemics on the Continent, secured passage of the monumental Public Health Act of 1848. The law created the National Board of Health, which was empowered to establish local
boards with authority over sanitary matters. A major victory for the sanitarians, the Public Health Act of 1848 served as a benchmark for the development of English public health administration during the next quarter century. Humanitarian sentiment was of much less importance in the movement than the applied principles of political economy and social utility advocated by Jeremy Bentham and the Philosophical Radicals. From the perspective of an emerging urban industrial bourgeoisie, epidemic diseases and excessive mortality were preventable causes of economic loss and social disorder.21

The sanitary movement in the United States began in response to urban conditions similar to those in England. In 1800 serious health problems related to poor sanitation and infectious diseases, including yellow fever, were nothing new to the young nation’s former colonial cities.22 “From the standpoint of American public health,” writes John Duffy, “the period from 1793 to 1806 deserves to be known as the yellow fever era.”23 During those years the disease ravaged Philadelphia, New York, Baltimore, and even New Haven, resulting in the establishment of early health organizations and bringing about modest sanitary reforms. Over the next three decades, however, the impact of developments in transportation on commerce and industry brought stressful growth to New York, Boston, Philadelphia, and Baltimore. By 1830 older, uncongested, and intimate patterns of residence and relationships in the cities were being supplanted by crowding, segregation, and anonymity. Thus, the earlier health reforms inspired by yellow fever were undermined by emerging industrialism and a burgeoning philosophy of individualism.24

In New York hogs roamed the garbage-strewn streets, privies were common visual and olfactory landmarks, and residents jokingly referred to the city’s water source as a sure purgative. But the worst sanitary conditions in the cities existed in districts where blacks, Irish immigrants, and native white laborers crowded into shabby tenements and damp cellars.25 Citizens in comfortable situations viewed these districts as dens of sin and iniquity where a just God occasionally punished the miserable inhabitants by visitations of disease and death. Yet in New York, as in Liverpool and Manchester, this outlook was challenged by an epidemic of Asiatic cholera in 1832 and again in 1849.26 When upstanding, moral members of the community fell victims, infectious disease acquired a new significance, a more important, personal meaning.

“Sanitary change in the antebellum United States,” argues James Cassedy, “was stimulated by many forces. However, as a self-
conscious reform movement in the 1840s and 1850s it got its primary
impetus from the dynamic, numerically based, and politically effec-
tive sanitary movement which had begun in Great Britain about a de-
cade earlier. 27 As in England, pioneering studies of health
conditions in the older American cities were the work of physicians
who were well aware of precedents across the sea. In On the Influence
of Trade, Professions, and Occupations in the United States, in the Produc-
tion of Disease (1837), Benjamin W. McCready of New York closely fol-
lowed Thackrah's method of analysis. Noting the filthy conditions in
which the city's laborers and their families lived, McCready asked:
"Can we wonder if in such a state of things we find moral as well as
physical disease, vice as well as sickness? Can we expect men who
live thus to be sober and orderly, or women to be cleanly and domes-
tic? . . . Would it not be easier to prevent the evil than to check it
when it is formed? . . . Motives not only of mercy for the poor, but
of fear for ourselves, call for a reform." 28

In 1845 Southwood Smith's American counterpart, John H.
Griscom, a graduate of the medical department of the University of
Pennsylvania, published a study entitled The Sanitary Condition of the
Laboring Population of New York. 29 Repeatedly citing Chadwick, whom
he knew, Griscom called for systematic street cleaning and garbage
removal, extension of the new Croton River water supply to the entire
city, and construction of an underground sewer system designed and
supervised by competent engineers. 30 In an address before the New
York Academy of Medicine nearly a decade later, he calculated the
cost of sickness to New York for 1853 alone to be $6,692,640. Of this
amount, Griscom laid up nearly 60 percent to preventable causes,
which he attributed to defective sanitary law and administration. 31

A few outstanding American physicians, like their English coun-
terparts, figured importantly in the sanitary movement. Their role
was all the more significant considering the declining status of the
orthodox medical profession. By the 1830s medical practice was a bat-
tleground fought over by regularly educated physicians, Thomsonian
"steam" doctors, homeopaths, eclectics, and folk healers. Rapid
growth of unregulated, competitive, proprietary medical colleges
lowered the standards of medical education. At the same time, the
efforts of medical societies to promote professional harmony and to
uphold educational standards grew increasingly feeble and finally
collapsed. Under these circumstances most of the older states re-
pealed their licensing statutes, and the newer ones enacted none
at all. While individual physicians often had the trust and respect
of their patients and even achieved prominence in their commun-
ities, by midcentury the profession's public image was a tarnished one. The major objective of the American Medical Association's founders in 1847 was to elevate the profession's standing by making the organization a vehicle of reform. Consequently, at its meeting in Baltimore the following year, the AMA appointed a Committee on Public Hygiene and thus joined the front rank of the sanitary movement.

The outstanding figure in the early movement, often called the American Chadwick, was Lemuel Shattuck, a Boston publisher, a founder of the American Statistical Association, and, on different occasions, a Whig member of the Boston City Council and the Massachusetts General Court. Like that of many another New England reformer of the 1840s, Shattuck's sense of propriety and order was offended by the economic and social transformation of Massachusetts and Boston during his own lifetime. In an effort to obtain data on which statistical assessments might be based, he helped a fellow Boston reformer, Dr. Edward Jarvis, to secure passage of the Massachusetts Registration Acts of 1842. Previously, as a member of the Boston City Council in 1841, Shattuck had published a study of the city's vital statistics for the period 1810-40, which showed deterioration of municipal health and increased mortality. Four years later he compiled a census of Boston, revealing a 35 percent growth in the city's population since 1840, of which one-third, mostly Irish, were foreign-born. This large and growing portion of the population, crowded into foul tenements, produced the rising rates of sickness and mortality that threatened the community. Unlike most English sanitarians, however, Shattuck considered disease to be the unfailing penalty for the immoral behavior that seemed to characterize the lives of the poor and foreign-born. Fearful that abandonment of traditional values by native Americans posed an added threat to health, he proposed to establish controls over the sanitary behavior of all citizens that would in time, he believed, win general acceptance.

When Asiatic cholera struck for a second time, in 1849, the foreign-born in Boston, and in other American cities, were the most heavily victimized. Following his election to the general court that year, Shattuck played a major part in the appointment of a commission, to which he was named, to conduct a sanitary survey of the state. In *Report of a General Plan for the Promotion of Public and Personal Health* (1850), the most famous document of the American public health movement, Shattuck set forth the commission's findings and recom-
mendations. The evidence proved, he wrote, in Massachusetts as in England, that preventable causes of disease and death "press most heavily upon cities and populous villages." It also proved that these causes were multiplying and that the administrative means to mitigate and prevent them did not exist. In order to deal with these dire conditions, Shattuck called for the creation of a general board of health and the establishment of local boards of health to institute and to supervise the rigorous implementation of comprehensive sanitary measures. Practicality, utility, and philanthropy as well as morality and economy were the grounds upon which he argued for the plan's adoption. Moreover, he believed that the "spirit of the age" required the exercise of paternal guardianship over the people's health as a public duty: "If a municipal or state authority neglects to make and execute those sanitary laws and regulations on which the health and life of the people depend, they violate a known duty, and are justly chargeable with guilt and its consequences; and they will certainly be punished, either by means of less capacity for labor, of increased expenditures, of diminished wealth, of more abject poverty and atrocious crime, or of more extended sickness and a greater number of deaths; or in some other form. These are the physical and social consequences of a neglect of sanitary duty."36 Here the essential theme of Jonathan Edwards's "Sinners in the Hands of an Angry God," translated by Shattuck and others into the emerging secular civil religion of nineteenth-century America, seems unmistakable.37 Within that civil religion, the gospel of sanitary reform was most certainly an important component.

The fundamental significance of the Shattuck report, however, lay in its identification of the sanitary movement's principal goal: legislation establishing an administrative agency with broad powers to implement sanitary measures. The boards of health the reformers envisioned hardly resembled existing bodies having that name. Boards of health in American cities usually came into being during the threat of an epidemic. After the emergency passed, they either lapsed into inactivity or were abandoned completely. As often as not, physicians constituted a minority of the board's members, who could only advise the mayors and councils at whose pleasure they served. Where there was no provision for registration of vital statistics (births, deaths, and marriages), health officers prepared bills of mortality by inquiring of undertakers and sextons. Having virtually no authority of their own, they could do little more than report violations of nuisance ordinances to the police, who tended to enforce such laws
casually. On the darker side, board members occasionally became involved in payoffs or kickbacks on municipal contracts for street maintenance and refuse collection.\textsuperscript{38} In some cities, such as New York during the 1850s, departments responsible for health matters jealously guarded their sources of graft and patronage jobs as vested political interests. Even in Massachusetts the climate of politics and reform at midcentury was unfavorable for the Shattuck report, and after the cholera emergency passed, it was laid aside and forgotten for many years.\textsuperscript{39}

The failure of the sanitary question to attract public or political attention by 1850 was due partly to the absence of an organized group similar to England’s Health of Towns Association to lead a movement for reform. In his report Shattuck recommended the formation of local voluntary sanitary associations to collect data, educate the public, and cooperate with authorities.\textsuperscript{40} Accordingly, in 1854, Dr. John Griscom proposed the organization of a voluntary association in New York City to be composed of physicians and laymen. Such would be, he believed, “of incalculable benefit to the commercial prosperity of this and other cities, and the happiness and comfort of their every inhabitant.”\textsuperscript{41} Continued growth of the city’s immigrant population and worsening health conditions were the principal factors behind the organization of the New York Sanitary Association in 1859 under Griscom’s leadership, an example emulated in Boston and Philadelphia the following year.\textsuperscript{42} “However,” Cassedy notes, “before 1860 there was little sanitary progress in the United States, and the ranks of the reformers were still small.”\textsuperscript{43}

Between 1855 and 1860, however, a definite movement began to take shape. In 1856 the Philadelphia Board of Health called for a national convention of physicians and laymen to meet in that city the following year. During the opening session, Dr. Wilson Jewell, speaking for the host board, congratulated those present “as the honored delegates to the first American congress ever convened for sanitary reform.”\textsuperscript{44} Actually, this first of four annual national quarantine and sanitary conventions was the result of violent southern yellow fever epidemics during the 1850s, as well as minor outbreaks on New York’s Long Island and Staten Island during 1855–56, and the seventy-four delegates attending (five of whom represented New Orleans) were mainly concerned with standardization of quarantine procedures. This and subsequent conventions between 1857 and 1860, however, brought together elected city officials, health officers, representatives of medical societies and merchants exchanges, and delegates from sanitary associations who were primarily concerned
with urban health problems. From these meetings a cohesive leadership group emerged whose members organized the United States Sanitary Commission in 1861 to assist the army medical department and to provide health and medical services for Union soldiers during the Civil War. The commission’s activities, however, weakened the movement in the cities, and during the war years Griscom and the remaining members of the New York Sanitary Association were defeated by powerful political adversaries in their persistent efforts to obtain municipal health reform legislation from the assembly at Albany.

The threat of cholera again in 1865 helped to bring about the New York sanitary reformers’ victory the following year. Yet as John Duffy suggests, perhaps the most compelling event leading to passage of the Metropolitan Health Act of 1866 was the famous Draft Riot in July 1863. Beginning as a protest against conscription into the Union army, the pent-up frustrations of Irish tenement dwellers exploded into a four-day orgy of mob violence against blacks and destruction of property. These events stunned the city’s middle and upper classes and then awakened them in horror to the squalor of the slums. According to a newspaper reporter’s account: “To walk the streets as we walked them, in those hours of conflagration and riot, was like witnessing the day of judgment, with every wicked thing revealed, every sin and sorrow blazingly glared upon, every hidden abomination laid before hell’s expectant fire.” The worst scenes of violence and destruction occurred in the vicinity of filthy, crowded tenements, where sanitary conditions were unspeakable. No doubt many New Yorkers, like one witness, found it “difficult to believe that so much misery, disease, and wretchedness can be huddled together and hidden by high walls, unvisited and unthought of, so near our own abodes.” It had been more than a decade since cholera inspired few and fleeting reforms, but in 1863 the peril of social upheaval motivated thoughtful citizens to take concerted preventive action.

In December 1863 New York’s most prominent laymen and physicians, including Hamilton Fish, Peter Cooper, Elisha Harris, and Stephen Smith, organized the Citizens’ Association. This body consolidated the energies of the New York Sanitary Association, the New York Academy of Medicine, the Association for Improving the Condition of the Poor, and other civic reform groups in a unified effort to obtain health reform legislation. Over the next two years, aided by the city’s newspapers, the reformers conducted a vigorous campaign to educate and enlighten public opinion, but again, their efforts to
push a municipal health bill through the legislature met with formidable opposition and defeat.

Redoubling their efforts, Citizens' Association leaders made an appeal to New York's physicians to aid in the struggle by participating in a citywide sanitary survey. On March 30, 1864, doctors who responded to the call organized the Council of Hygiene and Public Health, which carried out the survey that summer. Publication of the Report of the Council of Hygiene and Public Health (1865) revealed far-reaching sickness and mortality in the slums and offered a convincing argument linking disease with improper drainage, brimming cesspools, and the litter of foul streets and alleyways. News of cholera's advance in Europe and Asia during August 1865 was followed in November by the arrival of a cholera-stricken ship in the port and, subsequently, by diagnosis of a few local cases. In the ensuing atmosphere of excitement and alarm, the Citizens' Association rallied its forces once again behind a new comprehensive health bill prepared by the Council of Hygiene. On February 26, 1866, the legislature enacted the measure, which provided for a permanent metropolitan board of health with broad powers to carry out an extensive program of sanitary reform. 49

Like the Public Health Act of 1848 in England, the New York Metropolitan Health Act of 1866 foreshadowed the course of the American public health movement down to the end of the nineteenth century. In both nations reformers encountered bitter political opposition in their efforts to establish and maintain effective agencies of health administration. The opposition's long success in thwarting the movement at home is well illustrated by the first state boards of health, the Louisiana State Board of Health created in 1855 and the Massachusetts State Board of Health established in 1869. 50 Historians with partisan sympathies for North and South have disputed each other's claims to primacy for the two states, but the fact remains that both agencies were limited and grudging concessions to necessity at their inception and proved to be of limited effectiveness for many years. A more significant portent for the future occurred in 1871, when certain members of the New York Citizens' Association, notably Dr. Stephen Smith and Dorman B. Eaton, a prominent attorney and advocate of civil service reform, who drafted the Metropolitan Health Act, met to plan the organization of the American Public Health Association. 51 As a result, the New York sanitarians established an organization to pursue the goals of health reform on a national level. Imbued with the new nationalism of the postwar era,
sanitarians across the land flocked to the standard of cleanliness and health. “Throughout the 1870s and into the mid-1880s,” writes Dana F. White, “the case for the sanitary city was strongly reinforced.” During the 1880s, in fact, leadership in the public health movement passed to the South.
The Necropolitan South

When the president of New Orleans’s board of health noted in 1854 that "the primary object in the location of sites for cities, has never been, as it should be,—for the enjoyment of health,—the leading idea has always been,—its convenience for commerce,—business, or political purposes," he implied a distinction made by modern urban geographers between a city’s site and its situation.¹ Site is a city’s actual real estate or physical environment; situation describes its location relative to other places.² In pointing to "convenience for commerce" as the basic determinant, Dr. Edward Hall Barton was simply saying that situation rather than site had been uppermost in the minds of city founders.

The common theme in the early histories of New Orleans, Memphis, and Atlanta was the founders’ quest for a situation suitable to their economic purposes. After searching for a strategic spot on the lower Mississippi where France might tap the wealth of the great interior valley, in 1718 Jean Baptiste Lemoynè, Sieur de Bienville, chose the two-mile portage linking the Gulf and the river as the site of New Orleans. A century later some Tennessee land speculators, including John Overton, James Winchester, and Andrew Jackson, saw the potential for profits in a Mississippi River port midway between New Orleans and St. Louis. On May 1, 1819, the proprietors laid out a town on the lower Chickasaw Bluff overlooking the river, and General Winchester named it Memphis.³

Seeking better and cheaper access to western provisions, the planters of Georgia’s cotton belt persuaded the state legislature in 1826 to authorize a survey for a railroad that would ultimately connect lower Georgia with Cincinnati. A decade later, on December 21, 1836, Governor William Schley signed an act creating the Western and Atlantic Railroad of the State of Georgia. This law and a subsequent amendment provided for construction of a state-owned road running from the Tennessee River down through north Georgia to a point not more than eight miles south of the Chattahoochee River. In 1837 Colonel Stephen H. Long, the Western and Atlantic’s first chief of construction, chose a site located on a natural ridge—actually at a convergence of ridges—that separated the piedmont from the
cottonbelt and the waters of the Chattahoochee from those of the rivers of south Georgia. Here the stake for the railroad village of Terminus, successively renamed Marthasville in 1843 and Atlanta in 1845, was driven.4

Despite the many vicissitudes that accompanied their growth, by 1860 the economic development of the cosmopolitan Louisiana city, the Tennessee river town, and the Georgia railroad center had more than vindicated their founders' judgment of situations. In 1859-60 King Cotton's queen, New Orleans, handled 2,255,448 bales of the white fiber valued at $109,389,288, an amount constituting 59 percent of the value of all interior products received. Hogsheads of sugar, molasses, and tobacco vied with cotton bales for space on the levee, which, from harvesttime until spring, was lined with the masts and smokestacks of vessels that plied the oceans and rivers. The handling of these major crops, plus the distribution of western produce (such as meat, flour, corn, and whiskey) and manufactured goods from the North by factors, commission merchants, and wholesale men, generated a booming commercial prosperity.5

Memphis, similarly, was a child of cotton, and the rise of the Mississippi River steamboat trade during the 1840s and 1850s brought about rapid growth of a commercial economy based on cotton, provisions, and manufactured goods. By the time of the Civil War, the annual value of the city's receipts was almost forty million dollars. Atlanta also achieved a thriving commercial prosperity by 1860. Its merchants handled some cotton, but the Georgia town's growth came from railroads and the rapid development of an interior trade in provisions and dry goods. Actually, the rise of both Memphis and Atlanta came at the expense of New Orleans. As late as 1840, perhaps, New Orleans commercial men were still confident that the great liquid highway assured them a lion's share of the trade south of the Great Lakes from the Rockies to the Appalachians. But during the 1850s Memphis fortified its river position with railroads, and in 1857 it and Atlanta joined hands by way of the Memphis and Charleston. The movement of goods east and west over iron rails brightened the lights of west Tennessee and north Georgia, but for New Orleans, which embarked on railroad development both belatedly and halfheartedly, the shifting center of commercial gravity signified the end of an era.6

As southern commercial cities, however, the three labored under difficulties peculiar to the region's agricultural and slave labor economy.7 The absorption of capital by land and labor precluded capital formation for adequate banking and credit facilities or for much
investment in industrial enterprise. Prior to 1860 merchants in New Orleans, Memphis, and Atlanta lacked adequate banking facilities, and those of New Orleans especially were heavily dependent upon New York financiers for note acceptance and credit. Atlanta's ties to the regional economy were considerably weaker than those of New Orleans and Memphis, however, and its substantial number of northern-born merchants employed Yankee business methods from the beginning. Jonathan Norcross, a migrant from Maine, merchant, and antebellum mayor, recalled in 1871 that "the first merchants that came here were men of small capital, almost no capital at all, and who were not able to give credit. Trade was always brisk. A good deal of trade always centered here, but our merchants never sold on credit, and the consequence was that from the first we established a cash trade, and a result of this system was we always sold our goods for a less price and realized less profits." As the result of sharp trading at a high volume for low profit, Atlanta's merchants doubled the value of their business in 1854 to three million dollars in 1858, while at the same time achieving commercial penetration of the hinterland to the extent of one hundred miles in every direction. In this way they struggled successfully against the regional economy's impediments to capital formation and banking institutions. They were less successful, though, in overcoming another problem that has plagued Atlanta throughout its history. On February 24, 1860, the town's principal merchants met to form the Atlanta Mercantile Association and condemned "the discrimination of Charleston and Savannah in favor of Nashville and other cities in freight, as unjust and oppressive."

The years of Civil War and Reconstruction marked a profound change in the social destinies of the cities, but the course of their economic development during the period was essentially continuous with their past. For two decades before the war, regional spokesmen urged the development of manufacturing through the columns of DeBow's Review and during assorted commercial and railroad conventions. But in 1860 what Gerald M. Capers considers the "amazing industrial output" of Memphis's few foundries, mills, and railroad car shops amounted to only four million dollars, and in New Orleans, as in Memphis, a handful of mills, machine shops, and dry docks employed small capital and little labor in production that was, according to Robert C. Reinders, "primarily designed to fill local needs."

In Atlanta, the development of local industry contributed in only a small way to the town's growth before 1860. But during the Civil War the Atlanta Rolling Mill, managed by a former superintendent of
Richmond's famed Tredegar Works, and the town's strategic location as a railroad center made Atlanta, next to Richmond, the Confederacy's foremost industrial center. Despite the tremendous wartime stimulation to manufacturing, however, by 1870 Atlanta's industrial concerns, like those of New Orleans and Memphis, turned out products having only a modest value that were intended primarily for local consumption. One student of the city's history concludes that "Atlanta's manufacturing was relatively unimportant in the city's growth." Unlike New Orleans and Memphis, which were occupied by Union forces but otherwise virtually untouched, Atlanta was devastated by the war. But by 1867, following rapid repair of its railroads, the young north Georgia city embarked on a boom that reached twenty-five million dollars in trade for the year 1871 and tapered off only with the onset of the Panic of 1873. Hit harder by the depression of the 1870s than Atlanta was, New Orleans and Memphis slowly resumed their roles as two of the region's leading commercial cities. The return of moderate prosperity in 1877 found the merchants of Memphis seeking to extend their influence in the mid-South trade area and those of New Orleans hoping to offset their city's declining western trade through new commercial ventures in Latin America.

The urban situations chosen for their "convenience for commerce" underwent a human growth that was more than commensurate with the increase in profits. In 1830 New Orleans was the largest city in the South, Memphis was an insignificant village, and Atlanta did not yet exist. In 1870 New Orleans still held its commanding position, but during the interim Memphis and Atlanta grew spectacularly. Table 1 shows the growth of all three.

More than just growth, however, the numbers also show the important demographic changes of the period. In 1830 three out of five residents of Orleans Parish were black; in 1860 the ratio was one in seven. The trend of slavery's absolute decline in New Orleans after 1840 conforms to Richard C. Wade's classic analysis of slavery in the urban South, but Atlanta was an exception to the rule. Free blacks were significantly numerous only in New Orleans, yet between 1840 and 1860 their number also declined both relatively and absolutely. Taking the long view of the period 1830–70, the three cities seem to have been more or less affected by three great social movements. The removal of blacks from New Orleans by 1860 was the first. The second is found in the growth of the white populations, especially those of New Orleans and Memphis, between 1830 and 1860. Some of these people came from the hinterlands, an even larger number came from
Table 1. Populations of New Orleans, Memphis, and Atlanta, 1830–1870

<table>
<thead>
<tr>
<th>Year</th>
<th>White</th>
<th>Free Black</th>
<th>Slave</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Orleans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1830</td>
<td>21,281</td>
<td>11,906</td>
<td>16,639</td>
<td>49,826</td>
</tr>
<tr>
<td>1840</td>
<td>59,519</td>
<td>19,226</td>
<td>23,448</td>
<td>102,193</td>
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<tr>
<td>1850</td>
<td>89,459</td>
<td>9,905</td>
<td>17,011</td>
<td>116,375</td>
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<tr>
<td>1860</td>
<td>144,601</td>
<td>10,689</td>
<td>13,385</td>
<td>168,675</td>
</tr>
<tr>
<td>1870</td>
<td>140,923</td>
<td>50,456</td>
<td>—</td>
<td>191,418*</td>
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<td></td>
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</tr>
<tr>
<td>Memphis</td>
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</tr>
<tr>
<td>1830</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>[663]†</td>
</tr>
<tr>
<td>1840</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>[1,799]†</td>
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<td>6,355</td>
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<td>8,841</td>
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<td>18,741</td>
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<td>24,755</td>
<td>15,471</td>
<td>—</td>
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<td></td>
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<td>Atlanta</td>
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<tr>
<td>1850</td>
<td>2,060</td>
<td>19</td>
<td>493</td>
<td>2,572</td>
</tr>
<tr>
<td>1860</td>
<td>7,615</td>
<td>25</td>
<td>1,914</td>
<td>9,554</td>
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<tr>
<td>1870</td>
<td>11,860</td>
<td>9,929</td>
<td>—</td>
<td>21,789</td>
</tr>
</tbody>
</table>

*Includes persons classified as "other."
†Unofficial local estimates.


the tidewater, and, in the case of Atlanta, a substantial minority had been born in the North. Between 1840 and 1855, however, the white populations were augmented by thousands of Irish famine refugees and a lesser number of fugitives from political strife in their German homeland. Upward of half a million immigrants crowded into the port of New Orleans during these years, and in 1860 more than one-third of Memphis’s residents were foreign-born. The third movement came during the Civil War and the years following when
thousands of southerners, a great many of them former slaves, flocked to the region’s cities. From 1860 to 1870 New Orleans experienced an absolute loss of white people, but its black population doubled, while that of Memphis increased fourfold. In 1870 Atlanta’s population was nearly half black.

The social structures of the cities were roughly similar, but there were also differences corresponding to local custom and culture. By the 1850s New Orleans’s upper class was composed of planters who maintained townhouses during the social season and the city’s wealthiest merchants, a genuine aristocracy whose manners exhibited both the volatile chivalry of the tidewater tradition and the grâce and élégance of Louisiana’s French heritage. At the time of the Louisiana Purchase, and for some years thereafter, there had been an abrasive animosity between the newly arrived Yankee and the resident Creole. The term comes from the Spanish word criollo that means native-born, but then it implied Spanish or, preferably, French ancestry. Over the years, however, much if not all of the mutual resentment was relieved by advantageous marriages between Creole and American families. Since inclusion in the upper class was based primarily upon wealth, all national backgrounds including Irish came to be represented in it by the late antebellum period. Its members identified closely with the political economy of slavery and, for all practical purposes, they dominated the city. In New Orleans by 1860, according to one study, “the richest one per cent of the population owned about two-fifths, the richest five per cent better than two-thirds, and the upper ten per cent more than four-fifths of [the city’s] wealth.”

Neither Memphis nor Atlanta had an upper class of comparable description, although there was a similar tendency toward concentration of wealth in both. Surrounded in Shelby County by a planting aristocracy, by 1860 Memphis had acquired what Gerald Capers accurately calls an elite bourgeois, a petite noblesse of prosperous merchants and professional men that mirrored the values, tastes, and manners of the planters. By contrast, plantation culture had virtually no influence in Atlanta, a circumstance that allowed the spectacle of the rich merchant, with shirtsleeves rolled up and dusty boots, trudging afoot to his place of business to partially obscure class distinctions before the Civil War. The war and postwar boom of the late 1860s, however, produced a cohesive commercial upper class, and in 1870 Atlanta’s twenty-five wealthiest citizens owned a quarter of the young city’s real and personal property. The commercial ethos of New Orleans and Memphis was ameliorated in different
ways and in varying degrees by other cultural values, but such leav­
ening appears to have been almost wholly absent in Atlanta. Many
years later a thoughtful resident recounted the story in Greek my­
thology in which Hippomenes used three golden apples to catch and
seduce the swift-footed maiden Atalanta. "If Atlanta be not named
for Atalanta," reflected W.E.B. Du Bois, "she ought to have been."

The middle class in all three cities embraced several categories of
occupations in which incomes and social standing placed individuals
and families somewhere between the upper and lower classes. The
upper middling level included the lesser merchants, managers, and
contractors along with many of the more successful doctors, lawyers,
and clergymen. Associations within this heterogeneous group
tended to follow ethnic lines, particularly among those Germans who
were also Jewish. Occupations at the lower middling level included
those of small proprietor, certain mechanics and skilled craftsmen,
locomotive engineers, and salaried clerks and bookkeepers. Occupa­
tion was not an unfailing test of social status, however, for prior to
1860 a number of the cities' skilled mechanics were free blacks or
slaves, and Atlanta's most popular dentist was a free black named
Roderick D. Badger. A cultivated middle class did exist among New
Orleans's free blacks, who provided political leadership for the race
during Reconstruction. Yet by the late 1870s their economic and so­
cial position was threatened by an increasing determination on the
part of others to preserve the advantages of urban life in the South for
whites only.

Lower-class employment at common manual labor and work as do­
meric servants, porters, cleaningwomen, laundresses, and waiters
in public establishments was assigned to blacks before 1840. With the
arrival of thousands of starving Irish refugees, who sought little
more than to survive, blacks were driven from even the most menial
employments. Visiting New Orleans for a second time in 1846, the
noted English geologist Sir Charles Lyell observed that the black
draymen, hackmen, and hotel servants of a decade before had been
replaced by whites. By the late 1850s in both New Orleans and
Memphis, the principal figure in the lower class was the impover­
ished Irish bogtrotter. The war, however, curtailed the substantial for­
ign immigration to the South, which was never to resume, and after
1863 new migrants to the cities were preponderantly southern-born
whites and blacks of the very poorest sort. In Atlanta a heavy tax on
free blacks beginning in 1853 kept their number small, but between
1860 and 1870 virtually all of those who obtained work as day labor­
ers, railroad section hands, and draymen were black men.
The Necropolitan South

same was true in New Orleans and Memphis. As the result of declining foreign-born populations and a tremendous influx of freedmen, by the mid-1870s blacks held the unskilled common labor and domestic employments that made up the cities' lower class.²⁹

The booming population growth after 1840 also brought increasing poverty and overcrowding. Perhaps the most telling comment on economic and social mobility in antebellum New Orleans was made in 1857 by a northern-born clergyman who had spent much of his thirty-five-year residence in the city ministering to the poor. "Of the whole number of young men who have immigrated to New Orleans since my first acquaintance with that place," wrote the Reverend Theodore Clapp, "very few have succeeded in acquiring an independence."³⁰ In all three cities employment was highest from harvest until planting time and lowest from the "dog days" of summer until fall. The urban economy simply could not absorb the available labor, and the slack business season was a time of especially harsh privation and suffering. Severe epidemics, especially in New Orleans, left a growing number of widows and orphans without means of support, a community responsibility for which private charity was inadequate.³¹ The name "Pinch" (short for "Pinch Gut") was given to a north Memphis settlement to describe the physiognomy of its impoverished inhabitants.³² While Atlanta’s trade flourished in 1858, the author of an article in the local medical journal complained that "no city of the same size has a greater proportion of those who are not supplied with worldly goods."³³

The aftermath of the Civil War in all three cities brought social catastrophe. "If ever there was a single point at which the official northern war policy became an assault against the southern people instead of a military action against the Confederate armies," writes Don H. Doyle, "it was at Atlanta in 1864."³⁴ Recalling the extreme hardship and destitution of the winter of 1864–65, an old Atlanta resident remembered "swarms of white beggars" and particularly "one family whose plea was that they had had nothing to eat for two days except poke salad and pepper grass boiled without salt."³⁵ But the greatest suffering occurred among the thousands of destitute former slaves who huddled on the cities' outskirts, subsisting on the meager rations distributed by the Freedmen's Bureau and individual ingenuity.³⁶ The onset of depression in the 1870s brought even greater suffering. In Atlanta a bad situation was made worse by Georgia's infamous convict lease system. Trainloads of convict labor arrived in the city daily, while hundreds of black and white laborers remained unemployed.³⁷
By the 1870s, also, the ornate residences in New Orleans’s uptown Garden District and those on Vance and Peachtree streets in Memphis and Atlanta, respectively, contrasted starkly with the filthy, overcrowded housing of the lower class. After 1840 the meanest shacks and sheds occupied by New Orleans free blacks and some slaves were overrun by the Irish, who also established themselves between Camp Street and the river in a congested district that came to be known as the Irish Channel. Essentially the same thing occurred in Memphis, where the Irish took over the Pinch settlement and established a shantytown below the bluff known as Happy Hollow. Overcrowded housing conditions in Atlanta were exacerbated by wartime destruction, which compelled the poorest residents to seek shelter in the abandoned fortifications or build shanties out of material salvaged from the ruins. The scarcity of housing following the war brought about intense overcrowding and steadily rising rents. As many as fifteen to twenty blacks occupied a single room in Memphis, and a northern journalist noted that in Atlanta “fifteen and twenty dollars a month were charged for huts which a respectable farmer would hardly consider good enough for his swine.” By the 1870s the lower-class districts of New Orleans were extremely congested, and a city guidebook of the period informed readers that “tenements are in great demand, and rents continue high.” Following a combined cholera and yellow fever epidemic in Memphis in 1873, two local physicians penned descriptions of Happy Hollow, the area that was hardest hit. “Its population,” wrote one of them, “is almost exclusively Irish of the poorest class, and they are very much crowded together.” According to the second doctor, one could see the whole area from atop the bluff: “Far below our level a collection of rude shanties appears, constructed chiefly of the dilapidated materials of disintegrated flatboats, in diversified styles of architecture. Some are covered with old sheet-iron, and some with various materials which would puzzle a mechanic to describe. Under the same roof may be seen lodgings for various domestic animals. The houses are not far apart, as each foot of ground has an estimated value.” In an effort to reconcile the name of the slum with the miserable condition of its inhabitants, he concluded that “if poverty and filth are conducive to human happiness, its name is not a misnomer.”

Mounting poverty in the cities sharpened class and racial antagonisms and embittered social relations to the point that by 1860 virtually every civic problem was blamed on either blacks or the foreign-born, chiefly the Irish. Short of being under rigorous surveillance and control, slaves were considered hazards to the peace and
safety of any community. Worse yet, the free black, according to one New Orleans newspaper in 1858, embodied "the absolute idleness, the thriftlessness, the laziness, the dishonesty, the drunkenness, the proneness to vagrancy and vice of the negro when free from all the restraints of servitude." Poor immigrants were referred to repeatedly in the press as the "scum of Europe," and in Memphis the Whigs blamed their defeat in the town elections in 1844 on the "God Damn Irish!" The two despised groups, the blacks and the Irish, despised each other, and in their struggles to survive both were frequently victims of officially sanctioned violence.

After the war, race relations deteriorated even further. In Memphis on May 1, 1866, a nasty encounter between Irish policemen and black Union soldiers turned into a three-day orgy of violence against all blacks, during which a city magistrate exhorted the white rioters to "clean every Negro son-of-a-bitch out of town." Three months later, on July 30, a similar incident occurred in New Orleans, in which the police and other whites killed 34 blacks and seriously injured 119. Most of the violence against blacks was perpetrated by lower-class whites, but middle- and upper-class whites shared in the general unwillingness to accept the former slave as a free man. A newcomer to the village of Atlanta in 1847 noted that the majority of inhabitants were northern men, that there were but few blacks, and that the social atmosphere was egalitarian. But twelve years later, in 1859, the growing town's white dentists complained to the city council: "We feel aggrieved, as Southern citizens, that your honorable body tolerates a negro dentist [Roderick D. Badger] in our midst, and in justice to ourselves and the community [the situation] ought to be abated." After thousands of destitute freedmen flocked to the community, the Atlanta Medical and Surgical Journal expressed its sure conviction in 1868 that "the status of the negro is fixed. His unmoveable [sic] character stamps him a barbarian of barbarians." Population growth, increasingly rigid class stratification, and deteriorating social conditions were all reflected in the character of municipal government and politics. The municipal charters of New Orleans, Memphis, and Atlanta provided for the familiar mayor-council form of government, and prior to the mid-1850s the cities were governed by cliques of merchant elites who identified with the Whig party. Village days were left behind when the Memphis merchants in 1842, and those in Atlanta a decade later, suppressed rowdy flatboatmen, railroad construction laborers, and assorted camp followers in the interest of law and order. In New Orleans, long-standing Creole-American conflict and fear of the immigrants'
preference for the Democratic party brought about a strange and cumbersome division of the city into three separate municipal entities called faubourgs in 1836. Each municipality was governed by locally elected aldermanic councils and magistrates, yet for certain purposes the three councils sat as a general council presided over by a mayor elected at large. Finally, with the city beset by debt and credit problems and following a disastrous flood in 1849, which was exacerbated by the division of authority, the merchants brought about reconsolidation in 1852. The new charter provided for a strong bicameral council with appointive powers and a weak mayor, a device with which the merchants intended to control the politically volatile immigrant vote. When New Orleans’s elites—both American and Creoles, Protestants and Catholics—sought to rule through the American (Know-Nothing) party by means of violence and intimidation beginning in 1854, however, they lost control of the city government to the politicians of the laboring class they feared so greatly. Very much the same thing happened in Memphis. The nativist uproar of the 1850s, culminating in the Know-Nothing movement, affected Atlanta to a lesser extent, but in all three cities by 1860 there was a definite trend toward replacement of the leading merchants in public office by professional politicians.

Each of the three cities experienced relatively brief periods of military government under martial law during the war, but otherwise their political development during Reconstruction was essentially continuous with their past. Throughout the period 1847-73 Atlanta’s government consistently favored the interests of its men on the make. The city charter provided for a strong council and a weak mayor, however, and as a result of annual elections the town’s destiny was directed by a succession of mayors and councilmen who rarely spent more than one term in office. This situation, together with the main chance atmosphere of Reconstruction, were the chief impediments to responsible leadership after 1865. Property values and tax receipts rose steadily during the postwar years, but following the onset of depression in 1873, city officers found that interest payments on $1,610,500 in municipal bonds issued since 1866, plus payments of interest and principal on a floating debt of approximately $300,000, left them with barely one-third of the city’s revenue income for current operating expenses. In response to what they believed to be impending bankruptcy, a “Committee of Forty-Nine,” made up of Atlanta’s leading businessmen, drafted a new city charter that was approved by the legislature on February 28, 1874. Supported by Democrats and Republican carpetbaggers alike, the new charter did not resolve prob-
lems related to frequent turnover in public office. But by strengthen­ing the mayor’s executive function with veto power, requiring approval by public referendum for any bond issue, and limiting expenditures to current income, it represented a political reaffirma­tion of Atlanta’s business values.\textsuperscript{51}

In all three cities by 1877, following the Republican party’s brief appearances in municipal politics, the political scene was marked by contests between rival factions within the Democratic party. But the city governments were not appreciably different from what they had been in 1860. During the 1850s a ring of corrupt aldermen saddled Memphis with a debt of more than one million dollars, and according to Capers, “the advent of the Radicals to power merely meant that two bands of thieves instead of one would pillage the public.”\textsuperscript{52} Comparable developments in New Orleans increased the city’s debt to sixteen million dollars in 1868, and four years later the notorious Major E.A. Burke, a powerful local politician of working-class origins, was accused of seeking reelection to public office in order to conceal his thefts during preceding years.\textsuperscript{53}

In both cities speculation in depreciated municipal scrip, shady paving and drainage contracts, and profiteering on railroad bonds were the principal means of dishonest gain. A boondoggling contract to accomplish the drainage of New Orleans was let in 1871 to a company in which Louisiana’s youthful governor Henry Clay Warmoth—the prince of carpetbaggers—owned one hundred thousand dollars’ worth of stock. By the mid-1870s New Orleans’s debt had mounted to twenty-two million dollars, and Memphis’s bonded indebtedness exceeded four million. The Bluff City’s leading citizens tried to stave off municipal collapse in 1876 by securing adoption of a new city charter that may have been modeled after the Atlanta charter of 1874. But the limited organizational and fiscal reforms that were instituted were too little and too late.\textsuperscript{54} Perhaps politics was more violent in New Orleans, and the brazen stealing of elections was commonplace. But there, as in Memphis and Atlanta, the city government and the community seem somehow to have been made for each other.

If situation was a common theme in the histories of the three cities, their sites were significantly different. At the site of short portage chosen by Lemoyne in 1718, silt deposits had built up a natural levee at the crescent-shaped bend in the Mississippi River approximately one hundred miles above its mouths. Behind the levee the land sloped down for a mile and a half to a swamp, which in 1850 stretched an additional five miles north toward Lake Ponchartrain. Early settlers claimed the higher ground near the levee and along two
interior ridges and thus established the community's ecological pattern. The entire area's substrata, however, had the mucky consistency of glue, and even on high ground the water table was no more than three feet from the surface.

Since most of their locality actually lay below sea level, New Orleans's inhabitants were continually threatened by flooding. Besides an annual average rainfall of sixty inches, severe storms and hurricanes caused Lake Ponchartrain to overflow its shoreline and flood low-lying neighborhoods. During spring flood stage a swollen and turbulent Mississippi River might cause a crevasse above the crescent bend, bringing disaster to the city, as did the famous Sauve's Crevasse of 1849. Following numerous floods from the antebellum period down through the 1870s, the waters receded through evaporation made agonizingly slow by a moist, semitropical climate. A local physician described the site of New Orleans accurately and succinctly as one that had been "robbed from the swamp."55

By contrast, Memphis's elevation on the lower Chickasaw Bluff was 260 feet, but the town's immediate physical environment was a swampy area flooded annually by the Mississippi River. From early times down through the 1870s the community's environs were drained almost exclusively by a meandering creek called Bayou Gayoso, which emptied into the Mississippi by way of the tributary Wolf River. As the years passed and the town grew, the bayou became a sluggish, open sewer, which overflowed in nearby low-lying neighborhoods such as Pinch during heavy rains or when floodwaters from the Mississippi backed up.56 In Memphis, like New Orleans and Atlanta, the upper class occupied the high ground, and descending orders of society followed the contours of topography. While radically different from that of New Orleans, the site of Atlanta operated similarly as a powerful psychological force upon the community. The town grew around—it literally encircled—the so-called Terminus stake driven atop the ridge at an elevation of 1,050 feet. Virtually no Atlanta boomer seeking to extol the city's alleged pluck and spirit, from the earliest times to the present, has failed to associate growth and material progress with altitude. The area's rounded hills and valleys were believed to complement altitude by providing natural drainage toward the Chattahoochee River on the north and into the South and Ocmulgee rivers to the south. These features were enhanced by a climate that a local physician considered "eminently desirable" because, as economic developments attested, it "acts energetically on the human constitution."57
Despite significant variations in the characteristics of their sites, the growth of all three cities was accompanied by steadily worsening environmental conditions. In each instance, moreover, these conditions were related in one way or another to an absence of provision for adequate drainage. At an early day, New Orleans's squares (or city blocks) were ditched to allow runoff of storm water into the swamp. Over the years the ditches, or street gutters, were improved by the addition of plank siding and bottoms, and small footbridges (trottoirs) were built to facilitate pedestrian crossing. During the 1830s and 1840s several large drainage canals were excavated and equipped with paddle-wheel pumps to receive overflow from the gutters and propel it into the lake. But by the 1850s the gutters and canals had long since become a powerfully odoriferous open sewer system choked with all manner of slops and waste in which the movement of water was barely discernible.\textsuperscript{58} Thousands of privies contaminated the saturated soil, and flooding distributed their contents mainly among the crowded inhabitants of tenement housing. Severe flooding in 1868–69 produced substantial efforts to improve and enlarge the open drainage system during the early 1870s. Yet by 1877, despite the expenditure of more than five million dollars in half a century, municipal drainage remained an unresolved and vexing problem.\textsuperscript{59}

Although their circumstances differed from those of New Orleans, essentially the same thing was true of Memphis and Atlanta. By the 1870s Memphis’s Bayou Gayoso had become clogged by excrement and wastes; stagnant, rubbish-filled pools stood in low-lying areas; and the town's four and one-half miles of privately owned sewers served only the principal business houses and hotels.\textsuperscript{60} Given the haphazard process of settlement in antebellum Atlanta, and in the absence of systematic grading of lots and streets, rains carried washings from dwellings, stockpens, and privies across adjacent property into gullies and small ravines. After the war the municipal government used readily available rock and concrete to convert some of the natural drainage courses into crude trunk sewers. As a result of heavy population growth during the 1870s, however, the outfalls of these foul trunks were to be found either within or closely proximate to congested neighborhoods. A sanitary commission appointed in 1876 to study the problem and make recommendations issued conflicting reports, and this was where matters stood for years to come.\textsuperscript{61}

The condition of streets and alleyways in the three cities was closely related to the absence of adequate provision for drainage. Os-
tensibly, the city councils expended more money for street paving over the years than for any other public purpose, but the repeated disappearance of gravel, shells, and ballast stones below the surface of mud indicated both poor drainage and questionable relations between city officials and paving contractors. In dry weather wagon traffic ground the streets to a fine dust, which rains converted to deep, dangerous quagmires, and fatal accidents involving man and beast were not uncommon. Streets and alleys were also convenient depositories for all manner of filth and garbage, which drew the attention of pecking fowls as well as roving bands of curs, goats, and hogs. During hot weather, especially, the combined stench arising from privies and streets was enough to sicken even the most hardened resident. In New Orleans the privilege of collecting garbage under city contract was dispensed as political patronage, a sorry arrangement that Memphis adopted in 1867 when the mayor and council sold the city's slop carts and mules. The garbage situation became so desperate in Atlanta during the summer of 1874 that the city council temporarily suspended an ordinance prohibiting hogs from roaming at large. Removal of filth and garbage from the streets was done by the chain gang, which included urchins as young as eight years and an occasional prostitute, most of them black. The chain gang in New Orleans supposedly scoured out the street gutters from time to time, but as one city historian noted, "one can imagine that they didn't break their backs over what was always a hopeless task."63

In 1877 New Orleans and Atlanta had municipally owned waterworks, and the one in Memphis was privately owned; but none of them provided a safe and adequate water supply for either domestic or sanitary purposes. Prior to the Civil War the great majority of citizens in Memphis and Atlanta obtained household water from underground cisterns and wells, while those in New Orleans depended on rainfall draining off the roof into three-hundred- or five-hundred-gallon cypress cisterns by the sides of the houses. Increasing density of population meant that more often than not these water sources were contaminated by seepage or vapors from nearby privies. In the congested tenement districts of New Orleans, where numerous families relied on a single cistern, a hot, dry summer invariably brought much suffering and sickness.

Both Memphis and New Orleans flirted with the idea of deep-drilled artesian wells before the war, but in both instances nothing came of it. There is reason to suspect that the artesian well experiment in the Crescent City was blocked by the powerful New Orleans
Water Works Company. The company was originally organized in 1835 to earn profits on commercial and industrial accounts and to provide fire protection for the city. As a result of repeated violations of its charter provisions and exorbitant rates, by the 1860s only a fraction of the five thousand taps on the company's account books were in service. Ownership of the waterworks passed to the city in 1869 when the company's charter expired. A report by the city water commissioners in 1877 showed that the works for which the city had paid $1,393,400 in thirty-year, 5 percent municipal bonds was in such bad shape that it was practically worthless.

The waterworks movement began in Memphis and Atlanta during the late 1860s with similar objectives: to provide water for commercial and industrial use and to bring about reductions in soaring fire insurance rates. It was just as well that neither set of promoters seem to have contemplated much residential service, since the Memphis works, completed in 1873, pumped from the polluted Wolf River and the Atlanta works, completed in 1875, drew water from a reservoir that was fed principally by rain washings from the area's natural drainage courses, which functioned as sewers. Public ownership in Atlanta and private enterprise in Memphis alike furnished a meager volume of water of poor quality, and in 1877 the Memphis Water Company was on the verge of bankruptcy.

The result of crowding a large population into a miserable environment where sanitary precautions were neglected, according to a New Orleans physician, was "a great penalty in the sacrifice of life," a result, moreover, that he believed to be "not only not astonishing—but it would be the operation of a constant miracle were it otherwise." There can be little doubt that much sickness in New Orleans and Memphis was attributable to poor drainage and the proximity of swamps. An early settler on the Chickasaw Bluff recalled many years later that "almost every one had the chills and fever." The records of New Orleans's Charity Hospital show that a large proportion of people admitted between 1856 and 1870 were diagnosed with malaria. While the evidence is scanty, there is good reason to believe that pneumonia, consumption (pulmonary tuberculosis), typhoid, and dysentery were major causes of sickness and mortality in antebellum Memphis. The record of those diseases in New Orleans, on the other hand, was sufficient in the view of one observer to "constitute the most forcible of all arguments for drainage."

During the 1870s there were assertions in medical journals and the public press that there had never been an epidemic of any disease in Atlanta. Yet virulent outbreaks of measles and scarlet fever appeared
early in the young settlement, and as a result of contamination of local water supplies, dysentery, typhoid fever, and "malignant diarrhoea" became endemic among inhabitants of the growing town's low-lying hollows.72 Even before the war it seemed apparent to one local observer that "the poor classes . . . are always more subject to diseases . . . than the wealthy."73 During the war and afterward, despite the provision of limited medical services by the Freedmen's Bureau, the impoverished and vulnerable former slaves in all three cities suffered greatly from influenza, meningitis, and, especially, smallpox.74 Among both black and white, however, there was a discernible relationship between poverty, overcrowding, filth, and disease. In 1875 a young Atlanta physician reported the first cases of diphtheria to appear in the city, "all occurring in crowded houses" where he also "found upon examination, the privies and water closets in bad condition and located very near the apartments of patients."75

Beginning in the 1830s the deadly, daily tolls taken by malaria and the common infectious diseases began to be overshadowed in New Orleans and Memphis by spectacular and devastating epidemics of Asiatic cholera and yellow fever. In New Orleans epidemics of both diseases during 1832 and 1833 claimed nearly 10,000 victims in a population of approximately 50,000, and in 1835 Memphis also had a severe cholera epidemic. The pestilence returned to the port of New Orleans in December 1848, whence it spread upriver by steamboat to Memphis. During 1849 cholera took 4,822 lives in New Orleans and caused approximately 400 deaths in Memphis, blacks and immigrants being the principal victims in both places. Following a decade's respite, cholera broke out in New Orleans again in 1866, and this time its dissemination outward was facilitated by railroads. There were about 1,875 cholera deaths in New Orleans and approximately 1,000 in Memphis, most of them occurring among the destitute, helpless freedmen. Cholera recurred in both cities in 1867, but its effects in both were obscured by succeeding epidemics of yellow fever. The last cholera epidemic in Memphis occurred in 1873; again it was introduced by way of New Orleans, and again the chief sufferers were freedmen. There were probably more than 300 deaths in better than 1,000 cases, but the precise number is impossible to determine, for again an explosive epidemic of yellow fever occurred during the same year. There was some excitement in Atlanta in 1866 over a few cholera cases among soldiers at nearby McPherson Barracks, and again in 1873 when the disease ravaged the lower Mississippi Valley. But there was never any cholera in Atlanta itself.76
Yellow fever, however, made the name of New Orleans synonymous with sickness and death during the 1850s, and as a result of postwar regional railroad development and changes in urban demography, the disease threatened the entire lower Mississippi Valley. Originally brought to the Western Hemisphere by the African slave trade, yellow fever is an acute infectious disease transmitted in a man-vector-man cycle by the female *Aedes aegypti* mosquito. The vector acquires the virus by a blood meal from an infectious human, and following an incubation period of approximately twelve days, it can then transmit the disease throughout its lifetime. Yellow fever is characterized by sudden onset of headache, chills, and fever followed by nausea, muscular pain, prostration, and the appearance of jaundice. At this point, from three to five days after onset, the patient may hemorrhage from external orifices, throw up the black vomit caused by internal hemorrhaging, and die following convulsions or coma, or the person may experience a remission of symptoms and begin a course of slow convalescence.

Yellow fever was believed to prefer victims of mature years, with children and old people relatively, but not exclusively, exempt. The greater number of cases seemed to occur in persons between fourteen and forty, and strangely, the healthy and well-nourished appeared most likely to die. Slender, “nervous” individuals frequently escaped altogether or recovered quickly. Women seemed less susceptible than men, and they also had more favorable prospects of survival. Race and “acclimation,” however, were considered to be the most decisive of all factors. Survival of an attack confers lifelong immunity on white and black alike, but blacks possessed a genetic resistance to the disease that took its greatest toll among whites.

Since the fever’s principal victims in New Orleans were newly arrived immigrants, the affliction came to be commonly known as the “strangers’ disease.” This designation expressed a nativist antipathy toward the foreign-born that combined medical and social theory to sustain the belief that the native-born, or persons long resident in the city, possessed either an innate or acquired immunity to the disease. Tenuous at best, the upper- and middle-class notion of their acclimation to the southern climate and its fevers would be shattered in 1878 when yellow fever invaded not only the crowded, filthy hovels of the poor but the mansions of the rich as well.

The first outbreak of yellow fever in New Orleans in 1796 began a half century of increasingly violent epidemics. Of these explosive events, a northern-born clergyman, who ministered faithfully to the
sick and dying for thirty-five years, wrote: "A volume however ably written, could not worthily portray the wretchedness caused by a single epidemic—its long annals of bereavement, of widowhood, of orphanage; its unutterable griefs, solitude, and destitution; its heartrending spectacles of thousands who fell without a relative or friend near to close their eyes and perform the last sad offices for their remains." Yellow fever wrought its most devastating havoc in New Orleans at the peak of immigration in the 1850s, when epidemics in 1853, 1854, 1855, and 1858 brought a veritable reign of death. During the great epidemic in 1853, unquestionably one of the worst urban disasters in American history, approximately forty thousand persons were stricken, of whom more than nine thousand died.

The first clearly identifiable outbreak of yellow fever in Memphis occurred in 1855, causing at least 250 deaths in 1,250 cases. As the fever spread, a group of young clerks, following the example set by a similar group in New Orleans in 1837, organized a volunteer benevolent society known as the Howard Association to provide food, medical attention, and burial for the poor. The most conspicuous feature of the epidemics that occurred in both New Orleans and Memphis in 1867 was the fever's prevalence among previously unexposed freedmen with an unusually low case fatality rate. Following its outbreak in August 1873, the most disastrous yellow fever epidemic in Memphis to that time caused more than two thousand deaths in about seven thousand cases, the chief victims being poor Irish inhabitants of a waterfront slum. Undoubtedly, the steadily widening distribution of yellow fever from southern ports drove business toward emerging markets in the interior such as Atlanta. The Atlanta Medical and Surgical Journal called attention to this favorable trend in 1858, one that was further enhanced in the 1870s by yellow fever epidemics at Savannah and Brunswick.

Despite its fortunate exemption from the ravages of cholera and yellow fever, Atlanta had a fearful mortality rate that qualified the community for inclusion along with New Orleans and Memphis among the cities of the necropolitan South. Prior to 1878 there was no legal provision for recording vital statistics in either Atlanta or Memphis, and although the statute establishing the Louisiana State Board of Health in 1855 made such a provision for New Orleans, only deaths were being recorded as of 1873. Therefore, while it is impossible to present an accurate tabular record of the cities' mortality over the years, there is some basis for cautious generalization.

During the decade 1846–55, which included the great yellow fever epidemics of the early 1850s, New Orleans's crude annual death rate
averaged nearly seventy per one thousand of population. The average mortality rate among the city's blacks during these years was approximately 44.4 per thousand, but the death rate among whites was relatively greater, especially during yellow fever years and among the foreign-born. Considering that a careful estimate places the nation's overall death rate at this time at between twenty-one and twenty-three per thousand, the southern excess is awesome indeed. The evidence bearing on Atlanta's death rate in the 1850s is suspect at best, and a Memphis physician charged in 1855 that Memphis Medical Society mortality reports for the four preceding years were actually falsified to conceal a worsening situation. A conservative estimate for the period 1855-60, however, would place the annual average mortality rate of New Orleans at slightly over forty-five per thousand, that of Memphis at about forty, and that of Atlanta at slightly under thirty. There is more and better data for the period 1865-73, which reveal a more uniform trend in all three cities. Declining mortality among whites during the postwar years was more than offset by the enormous death rate of blacks. Official reports for 1870 show mortality rates in New Orleans and Atlanta to have been 42.9 and 40 per thousand, respectively, while an unofficial source put Memphis's death rate in 1872 at 46.6. It is a safe conclusion that during the 1870s the overall death rate in the three cities was probably somewhere between thirty and thirty-five per thousand, with an approximate average distribution of about twenty-five for whites and upward of forty-five for blacks. In each instance the principal causes of the excessive black mortality were underlying extreme privation and overcrowding, respiratory diseases, smallpox, and a truly horrendous infant death rate.

Even though there was abundant evidence to show that disease was becoming a serious problem, the cities' municipal governments were consistently indifferent in matters pertaining to sanitation and public health. In 1873 a Memphis newspaper editor endorsed a plan to remove all filth and corruption from the city and wondered, “What might be the fate of the government itself?” Otherwise, the newspapers were aided and abetted by city officials in suppressing reports of disease, even in the midst of raging epidemics. In back of the newspapers stood the merchants, and when one health officer boldly declared it his business “to look after the sanitary conditions of the city, not the commercial interests,” he was summarily driven from his post.

The local boards of health, composed mostly of physicians, were appointed by the mayor and council. Since positions on the boards
were unsalaried, except sometimes for that of the secretary, the appointments were largely honorific. Ordinarily, the boards received citizens' complaints, reported nuisances and violations of sanitary ordinances to the police, and, from time to time, made recommendations to the city councils. But they had no authority of their own, and thus their functions were altogether advisory. Atlanta established a board of health in 1848, and in 1872 its duties devolved upon seven salaried city physicians, whose principal job was to provide medical attention for the poor. Territorial governor William C.C. Claiborne established the first New Orleans board of health in 1804, and Memphis founded one in 1838. Yet in both cities the boards were active only during emergencies, and afterward they became moribund. Upon the outbreak of the great yellow fever epidemic in 1853, New Orleans had a board of health in name only, and in 1872 a local physician stated that "Memphis needs a Board of Health today more than she ever did before."  

After the great New Orleans yellow fever epidemic in 1853 and upon the recommendation of the New Orleans Sanitary Commission the following year, the Louisiana legislature enacted a law on March 15, 1855, establishing the Louisiana State Board of Health. During the first twenty years of its existence, however, the board was constantly harassed by opponents of quarantine, and it also endured a general lack of cooperation on the part of the authorities of the city of New Orleans. By the mid-1870s the relatively weak bureau suffered from want of financial support and entanglement in litigation. Following the Mississippi Valley cholera epidemic in 1873, the state medical societies of Georgia and Tennessee worked successfully to secure the enactment of health legislation. On February 25, 1875, Governor James M. Smith of Georgia signed into law an act that provided for a state board of health, subordinate county boards, and registration of vital statistics by county ordinaries. The new agency was opposed from the beginning, however, by county politicians; by sectarian medical practitioners, who opposed the law's discrimination in favor of regular physicians; and by the municipal authorities of Brunswick and Savannah, who resented the board's investigative activity during the yellow fever epidemics in 1876. After 1877, when the legislature failed to make an appropriation for its support, the Georgia board became dormant until 1903. On March 26, 1877, Governor James D. Porter signed an act establishing the Tennessee State Board of Health. Yet for two years the fledgling bureau had but little authority and no financial appropriation.
The establishment of state boards of health was but one hesitant, faltering step toward sanitary reform in the South. Though the Howard Associations were organized ostensibly to relieve the poor during epidemics, their gifts of food during the New Orleans cholera epidemic in 1849 were used, according to a member, to induce the recipients "to set about removing filth and objectionable matter from around them, [and] to cleanse and ventilate their apartments." Southern physicians disputed among themselves over conflicting theories of disease causation, and nowhere more than in New Orleans. Yet the most outspoken advocates of sanitary reform were doctors who were also teachers of medicine, such as Edward Hall Barton in New Orleans, Ayres P. Merrill in Memphis, and John M. Johnson in Atlanta. In 1849 Barton was joined by Erasmus Darwin Fenner, whose *Southern Medical Reports* emphasized sanitary issues, and by John C. Simonds, who, after the manner of England's Southwood Smith, published a statistical analysis of the costs of New Orleans's excessive mortality. Following the great yellow fever epidemic of 1853, Barton headed the specially appointed New Orleans Sanitary Commission, which conducted an exhaustive sanitary survey of the city and made elaborate recommendations for reform. But even he was not sanguine about prospects for change. By 1860 the sanitarians had no following in any of the cities. Moreover, by the time of the Civil War, the southern medical debate over the etiology and prevention of yellow fever had failed to produce a resolution of these issues. Most southern ventures in life insurance were unsuccessful, and residents of the Gulf states who bought policies in the North paid an added premium of 2 percent.

Several factors combined to impede the sanitary movement, the early phase of the modern American public health movement, in the South. A comparison of the response of New York's upper- and middle-class citizenry to epidemic crises during the antebellum period with that of New Orleans's suggests that the difference was fundamentally cultural. Within the context of southern slaveholding society, a society ruled by the paternal authority of a slaveholding class, assertion of liberal, urban bourgeois values, such as sanitary reform, were anathema to the governing ideology. Beginning in 1862, when New Orleans came under Federal occupation, General Benjamin F. Butler and his successor General Nathaniel P. Banks, the Massachusetts sanitarian, subjected the city to a thoroughgoing cleansing. No real conversion occurred at the point of the bayonet, however, and the demonstration served only to edify the few already
persuaded.\textsuperscript{107} By 1870, wrote Dr. Stanford E. Chaillé, a younger physician who took up the cause of Barton, Fenner, and Simonds, New Orleans had long since lapsed back into “filth, endless filth.”\textsuperscript{108}

The assumed perfection of antebellum southern society helped to sustain a belief in the essential health and salubrity of the cities, increasing sickness and mortality notwithstanding.\textsuperscript{109} It was sincerely and earnestly believed, for example, that immigrants were the sole cause of New Orleans’s reputation for sickness and that the city itself was healthy.\textsuperscript{110} An early Memphis settler wrote in 1872: “I honestly believe Memphis to be the healthiest place on the river from the mouth of the Missouri down.”\textsuperscript{111} Nearly a century later, Atlanta mayor Ivan Allen asserted that “altitude . . . gave inhabitants of Atlanta good health . . . a spring in their heels . . . an enthusiasm for their work . . . that people in the tidewater sections of the South did not possess.”\textsuperscript{112} For many years Dr. Barton of New Orleans tried unsuccessfully to convince his fellow citizens of their mistake, and certainly no one knew better than he that “it requires some moral courage to [try to] disabuse a community of a long and deeply-cherished error.”\textsuperscript{113} By the 1870s, however, the old ruling class was gone, and a rising generation of new men groped hesitantly for the reins of power. Meanwhile, disease and death stalked the cities, and in New Orleans, Memphis, and Atlanta the aesthetic and decorative impulses of the communities could best be seen in their cemeteries.
The Epidemic of 1878

On January 1, 1878, the New Orleans Daily Picayune devoted its editorial column to what the glancing reader might have taken to be the usual statement of New Year's wishes. It began with the customary expressions of hope that the new year would bring prosperity and general well-being to the city. Then, in a sudden shift of mood, the writer turned to more somber prospects.

We know that some who are in the enjoyment of robust health will [before the year is out] be on beds of sickness. We know that some who now glow with the brightness and hopes of youth will be done with time and the things of time before this year's tale of days is fully told. . . . We know that infants, nestling to-day on fond bosoms, will, a year hence, be holy memories. We know that some voices of mothers that wish happiness to children to-day will not be heard next new year's day. We know that some fathers, now full of bright expectations and happy hopes, will not hold their children in their arms after this new year is gone. . . . We know that this year must be just such another year, and that our wishes cannot help it. Here is a lesson for such of us as reason and meditate while we trust and hope.

This outlook clearly reflected a long community experience with disease and early death. Yet the editorial writer could not possibly have known how painfully and poignantly accurate the events of 1878 would prove his intuition to be.

The sole protection of New Orleans and the lower Mississippi Valley from yellow fever lay in the quarantine service of the Louisiana State Board of Health. After the cholera and yellow fever epidemics in 1873, the New Orleans Chamber of Commerce petitioned the federal government to "assume by law the exclusive control of all quarantine."¹ During the next five years certain southern representatives in Congress led a movement to secure the enactment of such a law. On April 29, 1878, President Rutherford B. Hayes signed the Quarantine Act of 1878, which assigned specific responsibilities to the surgeon general of the U.S. Marine Hospital Service. But the weak law made no appropriation for any government activity, and it prohibited federal infringement on the prerogatives of state and local health authorities.²
The year before, in 1877, the transition from Radical to Redeemer government in Louisiana brought Samuel P. Choppin to the presidency of the Louisiana State Board of Health. A Louisiana native of French ancestry, Choppin had been president of the board before the war, had risen to the rank of medical inspector general in the Confederate army, and was recognized as an outstanding surgeon. By statutory requirement he was strongly committed to the contagionist theory of yellow fever causation and its corollary of prevention by careful, systematic quarantine inspection. The political changeover in 1877 also brought two new medical officers to the board's front line of defense at the Mississippi Quarantine Station seventy miles below New Orleans. One of them, Dr. P.S. Carrington, the resident physician, was later said to be honest and well-intentioned but professionally incompetent, and his young assistant, Dr. G. Farrar Patton, though capable, was inexperienced.

There is, of course, no way of knowing how or when the yellow fever virus was introduced into New Orleans in 1878. From January through April of that year 504 vessels cleared the Mississippi Quarantine Station. Information was received as early as February that yellow fever prevailed in the Brazilian ports of Santos and Rio de Janeiro, and the following month it was learned that a virulent form of the disease existed in Havana, Cuba. Near the end of March the board of health ordered Dr. Carrington to detain all vessels from infected ports for fumigation, disinfection, and inspection. The first two procedures were accomplished by burning pots of sulphur in the holds and by flushing the bilges with carbolic acid. If illness resembling yellow fever was detected in a crewman or passenger, that person was to be immediately hospitalized in the station infirmary. The remaining ship's complement was then to be placed under observation while all bedding and baggage were treated with carbolic acid solution. The time involved in a ship's detention was left to the discretion of the resident physician. One member of the board of health maintained later that the quarantine of 1878 was as rigid as any in New Orleans's history. During April, however, Dr. Choppin allowed vessels in the fruit trade to proceed to the city without detention, and uniform inspection of all shipping was not begun until May 15. The end of the Ten Years' War (1868–78) in Cuba brought hundreds of refugees to the Crescent City. Writing many years later, the junior quarantine officer, Dr. Patton, recalled that "during the months of April and May a steady stream of people from Havana, where yellow fever was on the increase, poured into New Orleans by several lines of steamers."
Subsequent investigation of the epidemic's origins traced the infection back to a steamer named *Emily B. Souder*, three and a half days out of Havana by way of Key West, which arrived at the Mississippi Quarantine Station at some time on Wednesday, May 22, 1878. Upon docking at the station, the ship's captain met the resident physician at the gangway and reported a crewman sick with fever. Dr. Carrington examined the crewman, one James Fordyce, diagnosed his illness as malarial fever, and ordered him confined to the station infirmary. The quarantine officer also noticed "an unusual expression" on the face of the ship's purser, John Clark, who told Dr. Patton that he had been suffering from "facial neuralgia." After Patton examined the remaining twenty-seven crewmen and nine passengers and supervised fumigation and disinfection procedures, the *Souder* proceeded on up to New Orleans the same day. There, after the captain presented customhouse officers with a clean bill of health, the steamer moored in a berth at the foot of Calliope Street.6

Apparently, Clark became ill that night. Early the next morning he left the ship in the company of Dr. Emanuel S. Drew, a well-known New Orleans physician, who took him to the house of one Elizabeth Marshall, a widowed mulatto nurse, at 65 Claiborne Street, where he went to bed. Dr. Drew visited the forty-eight-year-old seaman again the following morning and, finding him worse, changed the orders for medication. At approximately 1:00 A.M., Saturday, May 25, Clark was seized with convulsions, and he died about an hour and a half later. The seaman was quietly buried the same morning after the required death certificate was completed by Dr. Drew. The physician subsequently told reporters and later testified under oath as an expert that Clark died of intermittent bilious fever. Word of the case was unofficially received by the board of health, and during the first week in June a medical officer was assigned to investigate it. After interviewing unnamed persons at 65 Claiborne Street, the officer concluded from their descriptions "that Clark died of yellow fever."7

By this time another crewman from the *Souder* had died. On May 25, the day of Clark's death, Thomas Elliott, a thirty-eight-year-old native of Ireland who was the *Souder*'s engineer, became ill while working aboard ship and returned to his rooming house at the corner of Front and Girod streets. During the next three days Elliott was attended by a member of the board of health, Dr. Frederick Loeber, before being taken to a private hospital, the Hôtel Dieu, on the evening of May 29. The seaman died at approximately 4:00 A.M. the next morning, and Dr. Loeber certified the cause of death as intermittent fever. Two medical officers of the board of health performed an
autopsy on Elliott’s body shortly after death, and two other officers, including Dr. Choppin himself, checked their findings. Months later, after the epidemic, four of the five physicians involved stated in either the board’s official report or in sworn testimony that Elliott’s death had been caused by yellow fever.

On June 1 the Souder left New Orleans for Havana, and its berth was immediately occupied by the steam tug Charlie B. Woods. Captain Woods, the tug’s master, and his engineer, a man named Cavens, lived with their families at 120 and 122 Constance Street, respectively. On June 15 Miss Laura Cammack at 124 Constance Street became ill, and she was diagnosed by a Creole practitioner as having malarial fever. Between early June and mid-July, apparently, every member of the Woods and Cavens families except Captain Woods was stricken by some illness, yet all recovered. After being called to attend Cavens himself on July 16, Dr. Joseph Jones, a prominent New Orleans physician and member of the board of health, was summoned to Miss Cammack’s house next door to see a sick child. Within a few days the child died, displaying the classic signs of yellow fever. On July 11 Dr. Samuel Merrifield Bemiss, a faculty colleague of Jones’s and the senior editor of the New Orleans Medical and Surgical Journal, attended a four-year-old child at 155 Constance. Bemiss learned that four days before, the child had visited in a house on the corner of Treme and Conti streets, two squares from the house on Claiborne where Clark had died on May 25. Bemiss diagnosed the child’s illness as yellow fever and reported the case to the board of health on July 12. Presumably, this was the first official report of a case of yellow fever in New Orleans in 1878. Yet in a subsequent presentation of the case to the Orleans Parish Medical Society, Dr. Bemiss stated that on July 18, in consultation with Dr. Choppin, he changed his diagnosis to hemorrhagic malarial fever. That same day, following black vomit and convulsions, the child died.

During the last week in March the Atlanta Constitution reminded readers of the severe yellow fever epidemic in Georgia two years before, noted the prevalence of “very malignant” yellow fever in Havana, and called on citizens and city officials to take sanitary precautions. Nearly a month passed with no action by the city council, and on April 18 the Constitution called attention to the relation between official apathy and increasing municipal filth. Unless something was done, the paper warned, “we shall be brought face to face with a terrible epidemic.” Despite repeated appeals from both the newspaper and the local board of health during the next two months, the city council continued its obdurate course. Finally, on
June 26, an exasperated Constitution notified Mayor Noel L. Angier, himself a physician, and the members of the city council that if their neglect resulted in an epidemic "it would certainly be better for them that they had never been born."\textsuperscript{11}

The Memphis board of health was also aware of yellow fever's presence in Havana, and on June 3 its president, Dr. Robert W. Mitchell, informed the other four members that he intended to ask the city council for funds to establish quarantine. Immediately, the quarantine issue created a rift between Mitchell and the other two medical officers of the board, which came to involve contagionist and anti-contagionist factions among local physicians.\textsuperscript{12} Later that month Mitchell submitted a petition to the city council bearing the signatures of twenty leading merchants that called for an emergency appropriation of ten thousand dollars for a strict quarantine program. The Memphis Daily Appeal endorsed the petition editorially on July 2, but within a few days the council received an antiquarantine counterpetition signed by thirty-two local physicians. Despite strong support by Mayor John R. Flippin, the quarantine petition was defeated in council on the ground that the weight of medical opinion opposed it.\textsuperscript{13} Dr. Mitchell resigned on July 10, stating publicly that the signatures on the doctors' counterpetition had been solicited by his medical colleagues on the board of health. "It is my earnest and honest conviction," he added, "that should we ever have yellow fever again, it will be our own fault in not taking the known necessary precautions against it."\textsuperscript{14}

In New Orleans, meanwhile, the fever continued to spread along Constance Street, and on July 24 the Louisiana State Board of Health announced publicly that seven out of fourteen cases of yellow fever had terminated fatally and that the fever was of an especially virulent type. The announcement was accompanied by an editorial in the Daily Picayune stating a policy of complete candor and expressing hope that the honest reporting of facts would have the effect of "alaying useless, causeless and damaging excitement."\textsuperscript{15} The most disconcerting fact, however, was that the majority of early cases and deaths occurred among young children in a comparatively clean portion of the city.\textsuperscript{16} Within a few days of this shocking disclosure, an unprecedented panic ensued, during which about 40,000 persons out of a population of approximately 211,000 fled the city. According to a physician eyewitness, New Orleans people "were taught that their children born in the city could not have yellow fever. Why? They did not know it, but they believed it. But when they saw their infants, their boys and young girls dying with symptoms similar to those of
foreigners . . . who die of yellow fever . . . they were seized by such a panic . . . as to cause an exodus unheard of in the history of the epidemics of New Orleans."^{17}

The receipt of official word in Memphis on July 27 confirming the presence of yellow fever in New Orleans produced an excitement in the city, according to the *Daily Appeal*, "beggaring anything we have experienced since 1873."^{18} That day Mayor Flippin issued a proclamation ordering the establishment of a quarantine station on President's Island just downriver from the city. Two days later the board of health appointed one of the doctors who signed the antiquarantine petition to the post of quarantine physician at a salary of three hundred dollars per month. The mayor also designated all policemen as sanitary officers, and the city council made an emergency appropriation of eight thousand dollars to purchase carbolic acid for disinfection purposes. Some leading merchants hastily organized a voluntary Citizens' Sanitary Commission to assist the board of health and the city government. By August 8 its members raised six thousand dollars to employ quarantine detectives on railroads entering the city and obtain a cannon for enforcement purposes at the quarantine station on President's Island.^{19}

On the day following the Louisiana State Board of Health's announcement on July 24, a special ward for yellow fever patients was set up at New Orleans's famed Charity Hospital. During the next two weeks the city government attempted to remove the more conspicuous accumulations of filth from the streets and gutters, and the board of health's small force of sanitary policemen tried to keep up with the work of disinfecting premises where cases occurred with carbolic acid. On August 10 the French language newspaper, *L'Abeille de la Nouvelle-Orléans*, described the efforts of the board of health as *surhumain* (superhuman) and tallied 431 yellow fever cases with 118 deaths to date. By this time, however, even though the fever was spreading rapidly and city streets were deserted, the board had not yet declared the existence of an epidemic. The secretary of the New Orleans Howard Association explained publicly that it was for this reason that the organization had not yet begun relief activities. Within a few days, on August 15, Dr. Choppin informed the secretary unofficially that an epidemic had been in progress for some time.^{20}

Apparently, the fever spread a considerable distance from New Orleans even before the board of health's announcement on July 24. Communities on the Gulf Coast, on the Mississippi River, and in the interior immediately invoked quarantine against the Crescent City, but in some instances they had already been invaded. Refugees from
New Orleans and those who subsequently fled other stricken communities carried the infection up the Mississippi Valley in successive waves by various means of transportation. The fever broke out in Vicksburg on August 9, and three days later it appeared in the small north Mississippi railroad town of Grenada. There, as nearly half of the 2,200 inhabitants fled, town officials threw open the jail and released the prisoners. During the ensuing horrible epidemic, there were approximately 1,050 cases and 350 deaths. A woman who was one of the last persons to flee Grenada in late August described the awful scene: "The plague spread with terrible rapidity. The dead were buried in the clothes in which they died. Sometimes the hearse hurried away leaving the remains above ground, no grave being dug. Food was painfully scarce. For over a week I had eaten only bread. The atmosphere was heavy with poison. It could be fairly tasted in the air, and it was impossible to remove it with disinfectants."21

On August 13 the pestilence appeared in the small southwestern Kentucky river town of Hickman. After approximately half of the 1,200 inhabitants fled, the fever claimed the lives of 150 persons, including 5 of the town's 6 physicians, among the 462 who were stricken.22 On the same day the fever broke out in Hickman, the Memphis board of health announced the death of Kate Bionda, proprietress of a snack shop at 212 Front Street near the river, as "undoubtedly a case of yellow fever."23 John McLeod Keating, editor of the Memphis Daily Appeal, described vividly the wild exodus of terror-stricken residents: "Stores and offices were hastily closed. . . . Men, women, and children poured out of the city by every possible avenue of escape . . . Out by every possible conveyance—by hack, by carriages, buggies, wagons, furniture vans, and street drays; away by batteaux, by anything that would float on the river; and by the railroads. . . . The stream of passengers seemed to be endless and they seemed to be as mad as they were many. The ordinary courtesies of life were ignored; politeness gave way to selfishness and the desire for personal safety broke through all the social amenities."24 Among the estimated twenty-five thousand persons who fled Memphis within the space of four days were some who carried the disease to nearby communities. In numerous instances fugitives were turned back on the outskirts of small towns and villages by equally terrified residents armed with shotguns and Winchesters. Driven from the roads at gunpoint, these unfortunates sought what shelter they could find in nearby woods.25 Other refugees traveled to St. Louis, Louisville, Cincinnati, and points north, while still others made their way to Chattanooga and Atlanta.
It was later estimated that between August 1 and the end of October Atlanta received about three thousand refugees, a number of whom remained permanently. During the latter part of August the worsening news from New Orleans and Memphis inspired Atlanta's Mayor Angier and the city council finally to undertake vigorous sanitary measures and to establish a special hospital for sick fugitives from the fever. The railroad center also served as the hub of mercy missions en route from the middle Atlantic and southeastern states to the stricken communities of the lower Mississippi Valley. The refugees and transients had money, and their spending contributed to the city's most prosperous fall business season ever. While disclaiming any "desire to make capital out of the misfortunes of other cities," the Constitution nevertheless felt constrained to call the attention of its visitors to Atlanta's attributes: "It is a good business point, it is a pleasant home, it is healthy, sociable, and progressive, and the commercial man, the laborer, the professional or the capitalist, who is looking for a new place of settlement cannot find a better point than Atlanta."26 At the same time the Constitution stimulated and helped to organize the city's charitable impulses in behalf of communities prostrated by yellow fever. In commending the efforts by members and pastors of the city's black churches to solicit relief funds, the newspaper took the position that "the church which drops the heathen business and collects money for the fever-stricken people of the South, will display both sense and religion."27

On August 13 Thomas C. Porteous, manager of a New Orleans dry goods emporium on Canal Street, wrote his employer, Jules Levois, in Paris, France, concerning the unprecedented and heartbreaking character of the epidemic in New Orleans. Unlike previous epidemics, he wrote, "so many young children are falling victims to it. [I]n their case they are attacked with a high fever, soon get congested and succumb in a few hours. Mr. Baldwin in the store has just lost his eldest child, an interesting little girl of 7-1/2 years after a sickness of only 24 hours."28 Described as especially malignant, the disease was also striking down some of the city's oldest residents, including many who had lived through all the epidemics since 1848. On August 16 members of the Howard Association met to begin relief activities and appealed to the community for contributions. The public was notified that assistance for "the destitute sick" might be obtained upon application to the association's office at 59 Camp Street. The Howards then divided the city into twenty districts, each under the supervision of a member who directed the work of volunteer visitors, physicians, and nurses. Large slate boards were placed in forty convenient locations,
where applicants for aid might leave their names and addresses. Henry Ginder, a young jewelry salesman, was one of the Howard district directors who had responsibility for the large area bounded by Tchoupitoulas, St. Charles, Felicity, and First streets. The first entry in his visitation notebook was “Sat. Aug. 17, 1878. Cassidy—365 Gravier, 1 little girl, Yellow Fever.”

During previous epidemics the Howard Association had attempted to provide the poor with doctors, nurses, medicines, food, bedding, clothing, and, finally, burial. But in 1878 the logistical problems of distributing relief threatened to become overwhelming. On September 3 the New Orleans Peabody Subsistence Association was formed under the leadership of Forrester Dolhonde, a wealthy cotton merchant, “to inaugurate a method of quick and practical relief.” The Peabody volunteers, operating as an auxiliary of the Howard Association, promptly received twenty thousand dollars from the parent organization for the purchase and distribution of supplies and rations. This division of labor, which enabled the Howards to concentrate on visitation, medical care, and fund raising, was also believed to be both economical and moral. The Howards reported later that “the plan of giving rations instead of money, promised and effected a great saving; for not only were the supplies needed purchased at wholesale prices, instead of the double prices paid by our patients at the corner grocery, but we were assured also that none of our money would be spent for liquor, which was too often the case.”

During September and most of October sixty-five workers at a Peabody warehouse on Magazine Street dispensed salt meat, molasses, and prepackaged rations of flour, rice, coffee, tea, sugar, and salt to hundreds of families every day. From another large building on the same street volunteers distributed clothing sent by donors in the North. October 9 was designated “collection day” in New York City. All that day nearly thirty wagons and drays, many of them supplied by A.T. Stewart and Company, came and went from the YMCA building depot at the corner of Twenty-third Street and Fourth Avenue loaded with clothing and bedding collected door-to-door all over the city and given by rich and poor alike. The outpouring of northern generosity during the epidemic moved one Peabody executive to exclaim emotionally: “Let any man use the word Yankee again in my presence and I will insult him. Were the people of the North our own flesh and blood they could not be more our brothers.”

By the last week in August the fever had spread throughout New Orleans; an untold number of persons were stricken, and the official death toll neared one thousand. Just then the fever raged in the
"New York City—The organized collection of supplies for the yellow-fever sufferers at the South." *Frank Leslie's Illustrated Newspaper*, 26 October 1878.

crowded tenements and boardinghouses along Girod, Front, and Tchoupitoulas streets, a district whose residents were reported to neither observe nor understand the most elementary principles of cleanliness. One physician later recalled that during the peak of the epidemic between August 26 and September 19 "the heaven above was like burnished brass; the stone pavements reflected the solar heat with overpowering force, and the uncleaned gutters and unpaved streets and sluggish canals reeked with noxious vapors." On the most fatal day, September 3, 92 out of 120 deaths were attributed to yellow fever. The disease continued to take a heavy toll among white children, and during the last week in August it invaded the home of Thomas Porteous, the Canal Street dry goods merchant. On September 3 Porteous informed his Parisian employer that a salesman in the store had been stricken. But, he added, "I am happy to say that both of my children are convalescing rapidly and there is no further cause for anxiety about them."

By August 17, following the tumultuous exodus from Memphis, about twenty thousand people remained in the city. Of these, approximately fourteen thousand were blacks, and the great majority of whites were the poorest Irish. Immediately, the Memphis Howard
Association, a group of younger businessmen who organized permanently on the New Orleans model during the epidemics in 1867, began to minister to the sick. A yellow silk armband with the name "Howard Association" identified its wearer as a missionary of mercy. Like their counterparts in New Orleans, the Memphis Howards found it necessary at the outset to separate visitation and medical care from direct relief. A Citizens' Relief Committee made up of merchants, bankers, and professional men under the chairmanship of Charles G. Fisher, a forty-one-year-old partner in the firm of Gage and Fisher Cotton Factors, was organized to distribute food, clothing, and other necessities. The committee appealed to the War Department for military rations and tents and, when the supplies arrived, set up evacuation camps outside the city limits. Only a small number of blacks and Irish could be persuaded to evacuate, however. Many of the former believed they were immune to the fever, and only four hundred of the latter entered Camp Father Matthew, which operated under the prohibition rules of the Catholic Total Abstinence Union. Altogether, Camp Joe Williams, Camp Duffy, Camp Wright, and Camp Father Matthew sheltered and fed approximately 1,300 persons during the ensuing epidemic.

Within a week the unusually malignant yellow fever virus virtually exploded in a densely populated section along Alabama Street and in the area between Washington and Jackson streets west of Bayou Gayoso. The board of health declared the existence of an epidemic on August 23 as the fever spread quickly to the southwest part of town known as Fort Pickering. Charles Fisher, the chairman of the Citizens' Relief Committee and the son of an elderly physician and his wife who lived in the small town of Covington twenty miles north of Memphis, wrote his younger sister on August 24: "Dear Susie . . . the fever [is] raging and spreading all over the city. [T]here is a great deal of suffering among the poor." Four days later he wrote her again of "32 deaths yesterday and 96 new cases. [I]t has now nearly two months to run before frost . . . our people are falling in every direction—a few are getting well when well nursed and attended to. I have no fears as I have had it and am careful as I can be under the circumstances."

By the last of August circumstances in Memphis grew more desperate by the day. Public drunkenness and violence were on the rise, and amid the general disruption, the city lay open to theft and looting. In an effort to maintain order and protect property, the Citizens' Relief Committee wisely appointed blacks to its membership, enlisted the services of black military organizations, and saw to the appointments
of black men to the depleted city police force. At a timely moment the threat of lawlessness abated when a black Zouave shot and killed a would-be looter. But the threat of starvation in the stricken city remained. At the first news of the fever, other communities invoked quarantine against Memphis. Within days the city was sealed off from the outside world, and business stopped completely. Memphis's black ministers, including the Reverend William Brinkley of Pleasant Garden Baptist Church and one Reverend Mr. Mansfield of Collins Chapel C.M.E. Church, attempted to meet the crisis by forming the Colored Preachers' Aid Society, which appealed to blacks throughout the country: "To the Colored People of the United States, Especially of the North: Our people are suffering, dying, and destitute. For heaven's sake, relieve us all you can by sending us means! We are not able to bury our dead, or to nurse and feed the sick and destitute. The most of us have no employment, as all business is suspended. Send us contributions of money or provisions speedily." The War Department responded quickly to the Citizens' Relief Committee's appeal for rations. But when they arrived, thousands of hungry blacks from the nearby countryside surrounded the distribution depot in a threatening manner, and only by bluff and luck were the committee's officers able to avert a riot.

"Alas, Memphis!" wrote an eyewitness. "What sights meet the eye of those who remain in thy midst! At every turn and corner a cry of distress is wafted on the breeze." During the first week of September, the city government and board of health ceased to function. Among officials who had not fled, Mayor Flippin; chief of police Philip Athey; Dr. Dudley Saunders, who replaced Dr. Robert Mitchell as president of the board of health; and nearly the entire police force were stricken. Meanwhile, the ranks of priests and nuns as well as physicians and nurses, many of them volunteers from all over the nation, were being winnowed by the fever. "God help us," wrote Charles Fisher on September 7, "where will the end be[?]" The epidemic peaked in the next two weeks as deaths averaged nearly two hundred per day. Victims were struck down so rapidly that many received no medical attention whatever. Hundreds died alone—in several instances whole families—and lay unburied for days. Howard visitors, physicians, and priests found bodies that were badly decomposed, other corpses that had been partially eaten by rats, and, in one instance, an infant sucking at the breast of its dead mother. Despite the efforts of the Citizens' Relief Committee, whose members obtained authority to issue burial certificates, the delay in burying the dead produced the worst horrors of the epidemic. Coffins and
"Agonizing appeal of women and children, in Memphis, to an overworked physician, to hasten to their homes." Frank Leslie's Illustrated Newspaper, 28 September 1878.

"Victims of the fever awaiting burial at Elmwood Cemetery, Memphis." Frank Leslie's Illustrated Newspaper, 21 September 1878.
rude boxes containing corpses were stacked like cordwood on city streets awaiting transportation to Elmwood Cemetery, where black men worked day and night for premium pay digging individual and mass graves.\textsuperscript{45}

Overhanging these dreadful scenes was a pall of smoke that rose from flickering barrels of tar amid the din of booming cannon, both measures being intended to alter the supposed epidemic constitution of the atmosphere. On September 24 the secretary of the Covington board of health notified Dr. Fisher that his son Charles had permission to visit the family for twenty-four hours on condition that he change clothing at the corporation limits. The visit was never to be made. Two days later Susie Fisher received a telegraphed message from a Citizens' Relief Committee officer: "Charley was taken worse last night. We did all we could for him but he died this morning at seven o'clock."\textsuperscript{46}

The terrible epidemic in Memphis was also a kind of tableau in which every facet of human nature was displayed. Catholic and Episcopal priests and nuns ministered heroically to the physical and spiritual needs of the sick and dying, and many fell at their posts of service. Such was the Reverend Charles Carroll Parsons, a native of Ohio and a member of the West Point class of 1861, who fought under Don Carlos Buell at Shiloh before his ordination as an Episcopal priest at Memphis's St. Mary's Cathedral in 1872, a true martyr of his faith. Annie Cook, thirty-eight, the mistress of Mansion House, a three-story palace of commercial affection on Gayoso Street, turned the bordello into a hospital where she supervised the nursing of fever victims until fatally stricken herself near mid-September.\textsuperscript{47} Many Howard physicians fell under the weight of staggering caseloads and fever; of 111 doctors who served during the epidemic, 54 contracted the fever, and 33 died. Although the majority of nurses faithfully attended their charges, there were numerous complaints against others for drunkenness and theft. Dr. Mitchell later wrote of the Howard nurse corps that "while many excellent and worthy nurses came, others also came whose only purpose seemed to be plunder and the gratification of alcoholic thirst, and whose presence here was scarcely less destructive to human life than the plague itself."\textsuperscript{48}

On the lighter side of grim events, according to one story, a family's black servants were asked to dress their former employer for burial in his lodge regalia. Instead, they attired the corpse in a costume the deceased had previously worn to a Mardi Gras party. In another instance, as friends and family stood by, the undertaker was preparing to screw down the lid of the coffin when its incumbent
suddenly opened his eyes and asked angrily: "What the hell are you doing?" The local newspaper reported: "A little trepidated, if not consternated, they lifted him from his close confinement and put him to bed." 49

Initially, the Howards appealed only to their southern fellow citizens for contributions, but from the beginning, donations of money and clothing came unsolicited from outside the region. The Washington Post of August 26 reported the activities of a yellow fever relief committee in the District of Columbia and noted that "each employee of the Postoffice Department is to be taxed 25 cents immediately, in behalf of the fever sufferers. A similar collection will be taken upon the 15th of September, and twice a month during the prevalence of the epidemic." As the southern epidemic reached raging intensity in early September, however, an appeal went out from the region's business and political leaders addressed to the chambers of commerce and charitable citizens of the Union's chief cities, describing the awful conditions at hand and even worse prospects ahead:

In New Orleans, Vicksburg and Memphis, as well as the smaller towns of Holly Springs, Grenada, Port Gibson, Canton, Greenville, Brownsville, Baton Rouge and Delhi, all business is entirely suspended. It is estimated that . . . on the Mississippi river south of Memphis over fifty steamboats are tied up and their crews discharged. The longshoremen and gangs of stevedores who were engaged in the receiving and discharging of freight are without employment. Four great lines of railroads are paralyzed, and their employees are idle. Nearly every place of business in the cities and towns where the fever prevails are [sic] closed, and their employees discharged. These employes are poor and dependent upon their labor for support. It is estimated that of these unemployed men there are in New Orleans, 15,000; Memphis, 8,000; Vicksburg, 2,000, making a total of [25,000] discharged workingmen, most of whom are heads of families, and represent a total population of 108,000 in actual and desolate want. These people have no means to get away from the pest-ridden cities[,] for them there is no labor, no wages, no bread—nothing but death or starvation, and this condition must last at least for fifty days, for there will be no stay of the pestilence, no resumption of business until frost. Averaging the support of each individual at 20 cents per day, which is 10 cents less than the cost of army rations, for fifty days the support of the suffering and destitute will cost $1,080,000, and this for subsistence alone. . . . We appeal to the chambers of commerce of the great cities. . . . We appeal to the charitable and the good; we appeal to the ministers of God for their influence and to their congregations. Even the smallest donation of provisions, money or medicine will be acceptable. . . . In the name of a common country and a kindred humanity we invoke for our stricken dying
and starving people, the charity of those whose homes and loved ones are secure from "the pestilence that walketh in darkness and the destruction that wasteth at noonday."

As a result of the appeal, yellow fever sufferers, their families, and others in New Orleans, Memphis, and smaller southern communities were the beneficiaries of generous contributions from northern cities as well as from sympathizers across the country and around the world. Gifts totaling nearly four hundred thousand dollars enabled the Memphis Howards to employ 111 physicians and 2,995 nurses and to provide medicines for the sick. Donations of approximately two hundred thousand dollars made it possible for the Citizens' Relief Committee to coordinate the distribution of clothing, bedding, and rations and also to function temporarily as a municipal government. Fraternal and religious groups including the Masons, the Odd Fellows, the Knights of Pythias, and the Hebrew Hospital Association also received contributions of nearly two hundred thousand dollars for the purpose of relieving their members.

In Memphis, as in New Orleans, however, the epidemic aggravated old religious, class, and ethnic antagonisms, and there were charges of favoritism and prejudice made against both the Howards and the Citizens' Relief Committee. Moreover, by the canons of nineteenth-century charity, recipients of benevolence were supposed to be worthy and deserving. An editorial eulogy of Charles G. Fisher, the chairman of the Citizens' Relief Committee, praised his steadfast stewardship, noting that he had "scanned narrowly all claims for relief and impressed on all about him the duty . . . [of making] charity a beneficence and not a means of idleness." Unfortunately, the writer concluded, "he succeeded only partially."

Altogether, the New Orleans Howards received $383,449.93 in contributions for relief work. Other local relief societies, including the Relief Committee Louisiana Association Army of Tennessee, the Touro Infirmary and Hebrew Benevolent Association, and the Ladies' Physiological Society, to mention but a few, also provided assistance to their members. Under the circumstances, duplication of benefits could have easily occurred. But here, as in Memphis, there were more serious charges against the Howards involving prejudice and discrimination. On September 15 L'Abeille reported accusations of favoritism against certain Peabody volunteers and called for distribution loyale et impartiale. The Howards admitted later that they had been charged with ethnic and religious prejudice but denied the truthfulness of the allegations. It was true, however, that an unusually large
number of New Orleanians who were ordinarily comfortable became supplicants for relief. The Howards claimed to have provided medical care for more than five thousand blacks during the epidemic, but the criteria for relief adopted by the Peabody organization clearly favored whites over blacks.\(^5\)

In late September, the disease appeared in the town of Bowling Green in south central Kentucky, and indigenous cases were discovered in Louisville, where yellow fever refugees had been welcomed despite the strenuous objections of some physicians.\(^5\) By that time the fever had devastated practically the entire lower Mississippi Valley. Thomas Porteous, the New Orleans dry goods merchant, described what he had seen after returning from an eastern buying trip in the last week of September: "I left New York on Wednesday evening the 25th ult. and only reached home Sunday afternoon after a tedious trip of four days. [T]he country between Louisville, Kentucky and New Orleans is one entire scene of desolation and woe. [A]lmost all of the little towns on the road . . . are depopulated by death, sickness or the inhabitants running away."\(^5\) During that week yellow fever broke out in Chattanooga, where, as in Louisville and Atlanta, refugees had been welcomed. The Atlanta Constitution immediately raised funds to sponsor the mission of three local physicians who established a hospital for fever victims in Chattanooga.\(^5\) But the appearance of the disease a scant hundred miles away produced in Atlanta an atmosphere of intense excitement and apprehension.

Earlier in the month, as fugitives from the epidemic arrived daily, the Constitution published testimonies by members of the Atlanta Medico-Chirurgical Association and by Dr. John G. Westmoreland, one of the community's oldest and best-known physicians, on the perfect safety of allowing refugees unrestricted entry to the city. But Westmoreland had also said that 'Chattanooga has done it with no more safety than Atlanta could do it.'\(^5\) Following the arrival of panic-stricken fugitives from Chattanooga beginning September 23, confusion and anxiety prevailed throughout the city as rumors of new yellow fever cases flew thick and fast. In succeeding weeks Dr. A.J. Pinson and the other City Physicians who made up the board of health were busily engaged in efforts to track down each rumor and give reassurance to the frightened public. But the fear that gripped the city was relieved neither by the board of health nor by the Constitution's bombastic assertion that "the only hints of a panic come from people at a distance, with once in awhile the yawp of an indigenous jackass."\(^5\) The local facts concerning yellow fever were
eventually made known: six cases occurred, all developing in refugees from stricken communities, two of which terminated fatally. Meanwhile, Atlanta was itself a stricken city, by fear if not by fever, a condition that lasted until the first frost.\textsuperscript{58}

One of the most dramatic episodes of the epidemic occurred during the month of October as the fever slowly began to relax its death-grip on the South. On September 10, following the southern appeal with its news of mass unemployment and destitution in the stricken communities, leading citizens of Washington, D.C., organized the Yellow Fever National Relief Commission for the purpose of coordinating the distribution of donated money, food, and clothing.\textsuperscript{59} The commission immediately dispatched provisions to areas accessible by railroad and then petitioned the War Department for use of a naval vessel in a planned relief expedition along the Mississippi from Cairo, Illinois, to New Orleans, an area in which virtually all transportation had been suspended. The federal agency declined to grant the petition but approved the request of two army infantry officers stationed at McPherson Barracks near Atlanta, Lieutenants Hiram H. Benner and Charles E. Hall, who volunteered to lead such an expedition.

The Washington relief commission's proposal met with enthusiastic response from citizens and businessmen in Chicago, New York, Baltimore, Providence, Rochester, Pittsburgh, San Francisco, Detroit, Milwaukee, Buffalo, and Philadelphia, among the larger communities, and from Hartford, Oil City, and Wheeling, among the smaller. Almost twenty thousand dollars in cash was raised together with food and other goods, including 1,500 quarts of champagne, 121 gallons of whiskey, and 288 cases of Budweiser beer. A group of St. Louis businessmen chartered a paddle wheeler, and on October 4 the \textit{John M. Chambers}, loaded with about four hundred tons of ice, food, and supplies, commanded by Lieutenant Benner, and flying a yellow flag inscribed with the words "National Relief Boat," headed downriver on its mission of mercy. According to the account in \textit{Frank Leslie's} "She went with the good wishes of the whole nation."\textsuperscript{60}

The \textit{Chambers} reached Memphis on October 7 and, following a tumultuous reception there, departed for Vicksburg en route to New Orleans. Unfortunately, Benner became ill during the next few days, and after the boat reached Vicksburg he died there of yellow fever on October 17. The War Department immediately ordered Lieutenant Hall and the crew to return to the expedition's port of origin. On October 29, the same day the Memphis board of health declared the epidemic at an end, the ill-fated \textit{Chambers} reached St. Louis.\textsuperscript{61}
Above, “Missouri—Departure from St. Louis of the National Relief Boat [the John M. Chambers], loaded with supplies for yellow-fever sufferers on the Mississippi.” Frank Leslie’s Illustrated Newspaper, 26 October 1878.

“Plague-stricken—waiting for the frost.” Harper’s Weekly, 19 October 1878.
Following an unusually torrid southern summer, the warm days of autumn stretched into October, inspiring a sympathetic northern poet to pen an appeal for divine mercy, "Waiting for the Frost":

STILL lifts the lily in the mild still air
   Its cup of perfumed snow,
And, star-like, gleam the myrtle blossoms where
   The autumn roses glow;
This fragrant beauty seems the mask of Death;
The whispering south wind is his poisoned breath;
We weary for these warm bright days to end;
   The summer lingers at what fearful cost!
O pitying God! in mercy to us send
   The white gift of thy frost!
From its cold touch the pestilence will fly,
   And plague-shut houses will their doors unfold,
And mourners, who have seen their loved ones die,
   Yet, shuddering, feared their helpless hands to hold,
Will seek, with tears, the graves from which, to-day,
   Love, terror-haunted, trembling turns away.
All powerless, Lord, at Thy dear feet we bow;
   If thou delay, how many lives are lost!
We ask a blessing never prized till now—
   The white gift of thy frost!62

Frost occurred in Memphis on October 19, the very day the poem was published, and in Atlanta the following day, but the New Orleans Daily Picayune of October 20 warned refugees in an editorial headed with bold caps to "STAY AWAY!"63 Falling nocturnal temperatures preceded the first frost in Louisiana on November 3. Shortly thereafter Gulf communities lifted their quarantines against New Orleans, and on November 19 the Louisiana State Board of Health officially declared the epidemic at an end.64

Though the event has been but little recognized, the lower Mississippi Valley yellow fever epidemic in 1878 was one of the great medical disasters in American history. From July through November the disease reached from New Orleans to Gallipolis, Ohio, striking more than two hundred communities in eight states. The most spectacular epidemics occurred in Memphis and New Orleans, but even the small towns and villages like Grenada, Mississippi, and Grand Junction, Tennessee, experienced terrible suffering. Altogether, according to estimates, there were around 120,000 cases of yellow fever and approximately 20,000 deaths. The financial costs of the disaster were
tremendous. In addition to the heavy expenses of relieving the sick and destitute, there were even greater losses—much of it outside the South—resulting from suspension of business and cessation of commerce. In his annual message to Congress on December 2, President Rutherford B. Hayes remarked on the extensive sickness and mortality attributed to yellow fever. But the real loss was incalculable, said the president: "It is impossible to estimate with any approach to accuracy, the loss to the country occasioned by this epidemic. It is to be reckoned by the hundred millions of dollars."\(^{65}\)

On November 28, Thanksgiving Day, survivors and returned refugees gathered in Memphis to express gratitude for the nation’s succor, to extol the epidemic’s heroes and heroines, and to commemorate the dead.\(^ {66}\) But the Bluff City, the storm center of the great epidemic of 1878, would never be the same again. As terror-stricken citizens reacted to the first news of fever in mid-August, the Daily Appeal announced that "this visitation is the straw on the camel’s back. We can endure no more. We must have relief from ignorance and incompetency in government, the cormorant greed of city and foreign creditors, and the visitations of a disease from which we ought to be, and would with proper sanitary regulations be exempt. We must make a change, some change."\(^ {67}\) The dimensions of the ensuing epidemic are revealed in statistics collated by the Memphis Howard Association from its own records, in reports of the various fraternal, benevolent, and religious organizations, and in the report of the physician in charge of the city hospital, Dr. Gustavus Brown Thornton. These sources show that of the approximately 20,000 persons remaining in the city, an estimated 17,000 contracted the fever, of whom 5,150 died. There were at least 11,000 cases among 14,000 blacks, resulting in 946 deaths. By contrast, virtually all of the 6,000 whites were stricken, and 4,204 cases proved fatal. The disaster’s economic cost to the city was later calculated to be upward of fifteen million dollars. But its most striking social feature, which by no means passed unnoticed, was the survival advantage of black over white.\(^ {68}\)

Yellow fever prevailed in New Orleans from July 18 to November 25, a period of 131 days, and reached its greatest intensity between August 26 and September 19. It was impossible, however, to make even an approximate determination of the number of persons infected. Although Dr. Choppin appealed to physicians to report cases to the board of health, the Daily Picayune stated its opinion in late August “that a vast number of yellow fever cases this season have not been reported at all.”\(^ {69}\) The very presence of yellow fever was denied by most of the Creole physicians, who instead treated their patients
for variously designated malarial fevers. To the editors of the \textit{New Orleans Medical and Surgical Journal}, this meant that "thousands" of yellow fever cases had gone unreported.\textsuperscript{70} Forrester Dolhonde, the cotton merchant who served as president of the Peabody Subsistence Association during the epidemic, told an assembly of the city's leading businessmen on November 21 that "the list of sick shows not less than 75,000 persons were afflicted with some type of fever for a longer or shorter term of illness."\textsuperscript{71} But Dolhonde's figure was undoubtedly obtained by combining the fifteen thousand who received medical aid from the Howard Association with the sixty thousand who obtained subsistence relief from the Peabody organization.\textsuperscript{72} Very likely the Louisiana State Board of Health's report of twenty-two thousand cases was considerably shy of the mark.\textsuperscript{73}
Following an examination of what the *Daily Picayune* termed "various well ascertained values," the board of health put New Orleans's economic loss during the epidemic at twelve million dollars. But economic considerations were secondary to the shattering social consequences of the disaster. According to the official report of the board of health, 4,046 persons died from yellow fever, of whom 3,863 were whites and 183 were blacks. This social aspect of the epidemic in New Orleans resembled the situation in Memphis. But the distinctively tragic feature of the New Orleans epidemic was that among the 3,863 whites who died, 2,344 were children under sixteen years of age, a large proportion of them four-year-old males. Moreover, many of the deaths of infants and children occurred in the homes of the well-to-do, a development that bred bitter class and race resentment. As the epidemic waned in late October, a committee reported to the mayor that "when the roll of death added new victims . . . the mansions of the rich were most afflicted. The vacant chairs and the absence of childish prattle will ever remind the survivors of their sad loss. . . . But not an idler or vagrant, whose death would be a benefit, has been laid low in this time of affliction."

The events of 1878 had proven the *Daily Picayune's* New Year's Day editorial to be prophetic, and surely some Memphians later pondered Dr. Mitchell's warning that those who fail to take precautions must pay a penalty. There were many in Atlanta who believed that that city's escape from the fever had been a narrow one. As quarantines were lifted and trade revived, the *Constitution* predicted accurately that "long before Christmas the superficial observer will not detect any signs of the greatest internal calamity that has befallen [sic] the south since the war. But below the surface the sad effects of this epidemic will be seen for years and years to come."
The Quest for National Health Legislation

While the epidemic was still raging, bitter recriminations were brought against the South for its sanitary deficiencies. Obliquely referring to New Orleans as a case in point, the Chicago Times charged that "filthy living is one, and perhaps the chief, of the causes of the yellow fever visitation." An article in the Washington Post of September 2, 1878, headed "Filth the Cause and Cleanliness the Cure of the Southern Pest," named a District physician as its author. Two days later, while yellow fever victims were dying by the hundreds in New Orleans and Memphis, the New York Times noted the disposition of the northern press to condemn the stricken South for its neglect of sanitary precautions. No doubt, the editorial writer observed, certain districts in southern cities were characterized by poor drainage and filthy streets, and thus there was an objective basis for the criticism. "But," the writer continued, "we do precisely the same thing, and our comparative immunity is due to our northern latitude and the distance that separates us from the natural habitat of the fever." It was pointed out further that the time required to travel considerable distances had been greatly shortened by steamships and railroads. Yellow fever refugees were arriving in New York daily. Had the fever reached such extensive proportions two months earlier, there was a good chance that it might have been introduced into New York. Then "it would have been only necessary for the deadly germs to get abroad in one of the filthy tenement-house districts to spread terror and dismay and defy all human efforts to exterminate it." The development of a national transportation system since the Civil War and the accompanying decline of the island community produced feelings of vulnerability. The secretary of the young American Public Health Association expressed such feelings when he announced that "the time has come when the advent of a pestilence to a Southern city can no longer be viewed with indifference at the North."

If anything, however, the reaction and self-recrimination at home was more vocal and severe than that which came from without. At the height of the epidemic one New Orleanian scored the city's au-
authorities for neglecting sanitary matters and charged the Redeemer administration of Governor Francis T. Nicholls with appointing incompetent medical officers to the state board of health. Shortly afterward, upon discovering that city administrator of improvements John McCaffrey had permitted contractors to use garbage as street filling, the New Orleans Times, the Daily Picayune, and L'Abeille joined forces to roast him out of office. In Memphis, the city hit hardest by the fever, the Daily Appeal conceded that "we have been a prey to every excess of human passion, folly, ignorance and incapacity." As the disease spread over the lower Mississippi Valley, the Atlanta Constitution called attention to the backwardness of the urban South in sanitary affairs. In its view, the stricken communities were now being required to pay heavily for years of indifference and neglect. At the same time, however, there was no justification for the complacency of Atlanta's city officials and citizens. "Let not Atlanta think that she is not as other southern cities are," cautioned an editorial. "She is in fact the worst one of the entire number."

While the epidemic was at blazing intensity in Memphis, H. Casey Young, who represented the city in Congress, together with city officials and businessmen, appealed to President Rutherford B. Hayes in a telegraphed message of August 26, 1878. In the communication Young and the others urged the president to appoint "a special commission of the ablest physicians and chemists in the country for the purpose of scientifically investigating the cause, nature, treatment, and future prevention of the fearful epidemic now raging." The petitioners expressed the belief that Congress, not then in session, would subsequently make an appropriation for the purpose of compensating the members of such a commission for their services. In the weeks that followed, Hayes received a number of similar requests to which he was personally sympathetic. But the president was not in a position to commit the recessed Forty-fifth Congress to financial sponsorship of an investigation.

Meanwhile, the voluntary Yellow Fever National Relief Commission, organized in Washington, D.C., on September 10, met daily to consider and respond to southern requests for aid, and as the epidemic waned, it sponsored the dramatic mission of the relief boat John M. Chambers. Then on September 20 Dr. John M. Woodworth, supervising surgeon general of the U.S. Marine Hospital Service, formally notified his fellow members on the commission of a recent development: "I have received from a lady [Mrs. Elizabeth Thompson] a pledge of $250 to be given on condition that a sufficient amount be contributed to pay the expenses of a commission of
experts, to be selected by myself after consultation and advice with the leading members of the American Public Health Association, to investigate, under my direction, the present yellow fever epidemic, with the view of gleaning such facts as are possible to be obtained respecting the nature and cause of the disease, its treatment, and especially its prevention. Such a commission should be composed of three or four persons and the expenses would be five or six thousand dollars." Woodworth urged that the additional funds be raised immediately so that the investigation might be undertaken while the epidemic was still in progress.

At this point began the final episode in what Fitzhugh Mullan has called "a long and destructive contest between two of the early giants of American public health, Woodworth and [John Shaw] Billings." Born in Chemung County, New York, on August 15, 1837, Woodworth grew up in Illinois, where he attended Warrensville Seminary and graduated from the University of Chicago. During successive winters from 1859 to 1861 he was a pupil of the eminent scholar Spencer Fullerton Baird at the Smithsonian Institution in Washington.

Upon receiving the M.D. degree from the Chicago Medical College in 1862, Woodworth entered the army medical service, attaining the rank of lieutenant colonel as medical director of the Army of the Tennessee and serving with distinction as General William T. Sherman's chief medical officer during the March to the Sea campaign. After the war, during 1865–66, he pursued advanced studies in Vienna and Berlin before entering medical practice in Chicago, where he also became active in both local and national professional and scientific endeavors. By any measure, Woodworth was an able and ambitious young man.

Younger by less than a year, John Shaw Billings was born on April 12, 1838, in Switzerland County, Indiana, a descendant through his mother of a Mayflower pilgrim. A precocious youth, he received the B.A. with honors from Miami University of Ohio at nineteen and three years later, in 1860, obtained his medical degree from the Medical College of Ohio. After a year as demonstrator of anatomy there, and with the onset of the war, Billings scored the highest pass on the regular army medical examination. In the spring of 1862 he was commissioned a lieutenant and hospital officer. By the time of his permanent transfer to the library of the army surgeon general's office in December 1864, Billings had become an expert on hospital organization and medical statistics. A supremely confident individual, he too was an extremely able and ambitious young man.

According to Mullan's account, in 1869 Grant's secretary of the Treasury, George S. Boutwell, appointed a medical member of his
staff and Billings to inspect and report on the government's decrepit hospital service for mariners initiated by President John Adams in 1798. Their report called for extensive reorganization of the service and establishment of the position of supervising surgeon of the U.S. Marine Hospital Service. Toward that end the young army medical officer collaborated closely with Boutwell in drafting the legislation enacted by Congress in 1870. Billings coveted the post for himself, but as a military man, he was barred from it by the law's requirement that the appointee be a civilian. Then in April 1871 Boutwell named the brilliant young Woodworth, only thirty-three, to be supervising surgeon of the Marine Hospital Service, a title changed to supervising surgeon general in 1873. In just a few short years, by 1878, Woodworth transformed the old marine hospital fund into a vigorous, efficient, uniformed officer corps, the forerunner of the U.S. Public Health Service. Meanwhile, Billings gained added recognition in both army and civilian circles as a medical bibliographer and sanitarian. When the epidemic of 1878 began to scourge the South, he also held the office of vice president of the American Public Health Association.

For the two aggressive young rivals, the epidemic presented a personal and professional challenge. The cause and nature of yellow fever were mysteries that confounded the medical profession's ablest members. "No question in medicine, and scarcely any in theology," noted a medical writer for Harper's, "has been debated more learnedly and more ardently—I may say, indeed, more furiously—nor for a longer time, than this one." The extent and destructiveness of the epidemic in 1878, however, created widespread support among the American public for the establishment of a federal health agency. Woodworth, as director of an investigative team of experts, and Billings, as a spokesman of the American Public Health Association, would both be in the limelight, and either would be a likely choice to head the proposed national sanitary bureau. As the country's chief health officer, the appointee would undoubtedly assume leadership of the American public health movement.

After consulting with APHA executives Billings and Joseph M. Toner as stipulated, Woodworth moved swiftly to choose for membership on what came to be called the Yellow Fever Commission some of the most distinguished medical men in the South. The three physicians, all of whom had served as surgeons in the Confederate army, included Samuel Merrifield Bemiss of New Orleans, formerly a member of the Louisiana State Board of Health, professor of the theory and practice of medicine and of clinical medicine in the medical department of the University of Louisiana, and senior editor
of the *New Orleans Medical and Surgical Journal*. A second physician member, Jerome Cochran of Mobile, Alabama, professor of public hygiene and medical jurisprudence in the Medical College of Alabama, had drafted that state's stringent medical practice law, reorganized the state medical association, and designed the legislation that constituted that body as the state board of health. As chairman of the medical association's Committee on Public Health, Cochran was the chief health officer of the state of Alabama. The other medical member of the commission, Edward Lloyd Howard of Baltimore, was professor of anatomy and diseases of the nervous system in the College of Physicians and Surgeons of Baltimore, editor of the *Baltimore Medical Journal*, chief physician of the U.S. Marine hospital in that city, and president of the Maryland State Board of Health. Shortly, Woodworth recognized the commission's need for the assistance of a civil engineer. As its fourth member, he appointed Colonel Thomas S. Hardee of New Orleans, chief engineer of the state of Louisiana.

With time of the essence and the effective date of their appointments October 1, Woodworth instructed the commissioners to meet in New Orleans "as soon as possible" and, with Dr. Bemiss as chairman, to commence the work of investigation. "It is hoped," wrote the surgeon general, "to make the investigation exhaustive in every important direction, but from the commencement of your work and during the continuance of the epidemic, you will direct your inquiries and observations especially to the causes of the present epidemic rather than to the natural history of yellow fever itself, which latter line of inquiry may be pursued subsequently, should the contributions of money be sufficient to warrant, or Congress so direct. The great object of the investigation is to glean all important facts possible to be obtained, which have reference to measures of prevention of future epidemics." After the work was completed in New Orleans, the commissioners were to visit as many other affected communities as possible and then submit a preliminary report to Woodworth prior to a special session of the American Public Health Association scheduled to convene at Richmond, Virginia, on November 19.

With profound disagreement existing among even men of good will concerning the cause or causes of yellow fever and with no criteria for determining the relative importance of "facts," the outcome of the Yellow Fever Commission's work was doubtful at best. Moreover, the agreement between Woodworth, Billings, and Toner to have the commission present a report by November 19, so that legislation might be drafted before Congress reconvened in early December, locked the investigation into a time frame of little more than six
weeks, a situation that virtually ensured that the result would command little respect. Perhaps many would have agreed with Dr. Be
miss's view that the yellow fever question involved "a study of enormous magnitude, and of importance paramount to any other of the present century."23 Yet as it turned out, the investigation revealed little about yellow fever, but rather a great deal concerning the ambitions of the surgeon general of the U.S. Marine Hospital Service and the political objectives of the American Public Health Association. These realities involved personal and professional jealousies and rivalries that, in the end, would surpass all considerations of scientific merit and national interest.

When the commission met in New Orleans on October 6, its work focused on an effort to circularize the city's physicians and thereby obtain information concerning cases and observations about the disease's origin and transmission. There was little likelihood for several reasons that this method of inquiry would yield very much, especially since the president of the Louisiana State Board of Health, Samuel P. Choppin, had previously been unable to obtain the cooperation of physicians in reporting cases, some of the city's practitioners even denying that yellow fever was present.24 Nevertheless, the commission spent nearly two weeks on preparatory work before taking to the field for approximately three days of house-to-house visitation. Woodworth had already dispatched Dr. Cochran to inspect the Mississippi Quarantine Station when, under pressure of time, the other members left New Orleans on October 23. During the next two weeks, the commission divided itself into two groups in order to make hasty visits to communities in Louisiana and Mississippi, including Baton Rouge, Vicksburg, Port Gibson, and Grenada. When it appeared that they were hopelessly behind schedule, the president of the American Public Health Association, Dr. Elisha Harris of New York, personally visited Gallipolis, Cincinnati, Louisville, and Chattanooga and then met the commissioners in Memphis on November 9.25 By then there was little time to prepare a report for the meeting in Richmond. When the New York Times man met the arriving southern commissioners at the train station during the afternoon and evening of November 18, he learned that their reports had not yet been completed.26

On Monday evening, November 19, at 7:30 P.M., in Richmond's Mozart Hall, President Harris called the opening session of the special American Public Health Association convention to order. Following the invocation, welcoming remarks by Governor Frederick W.M. Holliday, and brief comments by Dr. James Lawrence Cabell of the
University of Virginia, President Harris outlined the grave issues before the convention. In concluding, the president expressed his views on what he believed the late epidemic’s meaning to be: “These pestilences indicate the various deep-seated wrongs and neglects, vices and sins, of the people. Whenever the human race is in such a situation as to lose its strength, courage, liberty, wisdom, [and] lofty emotions, the plague, cholera, or fever comes, not committing havoc perpetually, but turning men to destruction and then suddenly ceasing . . . . [T]he pestilence speaks to nations, in order that greater calamities than the untimely death of the population may be avoided.” Surgeon General Woodworth then spoke briefly of the South’s great travail, the formation of the Yellow Fever Commission, and the generous contribution of Mrs. Elizabeth Thompson, the mention of whose name received sustained applause. The short opening session concluded with a brief address, with perhaps but few of those present aware that a firestorm of controversy had already erupted.  

That morning programs for the convention’s agenda, printed by Woodworth’s authorization, had been presented to surprised members of the APHA’s executive committee. According to the New York _Times_ account, President Harris had assigned responsibility for the convention program to two members of the executive committee in mid-October. Therefore, “Woodworth, having thus abrogated the rights of the committee, ignored them completely, and acted to the detriment of the interests of the association, was severely censured.” Having read of his censure in the paper, the surgeon general appeared before the executive committee the next morning, November 21, to explain that he had only filled in blank portions of the schedule sent him by Harris pertaining to his own report. Two committee members then retracted harsh statements they had made about Woodworth the day before. But the surgeon general subsequently told a _Times_ reporter that he felt “very much hurt” at having been treated in such an unjust manner. 

Whatever the case may have been, the fireworks were by no means over. On Tuesday morning, November 20, an allegation was made at the executive committee meeting that, despite assurances by the Yellow Fever Commission’s chairman, Dr. Bemiss, and by Woodworth that the commission’s report would be held in strict confidence until it was presented to the convention, “the report, by some means, believed to have been surreptitious, was obtained last night and telegraphed to New York.” The executive committee then “resolved, That the American public health association, by its executive committee, disapproves and disavows the premature publication of the general
The Quest for National Health Legislation

report of the yellow fever commission in a New York paper. With Surgeon General Woodworth presumably bridled and chastised, the commission’s general report was read before the convention by Dr. Bemiss later that morning.

The report presented six conclusions: not one case of yellow fever was de novo or of local origin; testimony favoring importation of the disease was “direct and convincing”; its transmission was due altogether to human intercourse; disinfectants were wholly useless in preventing its spread; “drugs or other therapeutic means . . . proved a constant failure” in treatment; and rigorous quarantines to the extent of total nonintercourse had proven effective. What was surprising to the many southern physicians present was the similarity of the report to the paper presented by Dr. Choppin, president of the Louisiana State Board of Health, the next day. Following the formation of the Yellow Fever Commission, the much-criticized Louisiana board had formed a commission of its own and had come to predictable conclusions. In his paper Choppin expressed the conviction that, owing to lax law enforcement and the mendacity of New Orleans’s commercial interests in evading any rule, nothing could be gained by additional quarantine measures. “The only certain and true preventative of yellow fever, in my humble opinion,” he said, “is absolute nonintercourse with ports where yellow fever is indigenous, from the first of April to the first of November of each year.” On the point of yellow fever’s alleged importation, therefore, the national Yellow Fever Commission and the Louisiana State Board of Health, strange bedfellows to say the least, presented a united, contagionist front. In doing so, Woodworth and the southerners set themselves on a collision course with the policies and purposes of the APHA’s leadership.

The conflict that marked the convention from the beginning reflected a mixture of enmity between U.S. Marine Hospital Service officers loyal to Woodworth and U.S. army medical officers allied with Billings. Unswerving partisan fidelity to the traditional contagionist, anticontagionist, and contingent-contagionist positions on disease causation theory and the new enthusiasm for the germ theory and laboratory methods also characterized the dispute. At the evening session on November 21, as reported in the Washington Post, Billings presented the report of the committee to which the Yellow Fever Commission’s report had been referred by the executive committee together with the former committee’s recommendations to the latter. At the outset, amiable approbation of the commission’s report and conclusions was expressed “with the exception of that relating to
disinfection.” Billings added, however, “The committee think it proper to observe that the investigation should take a much wider range, since what is desired is to obtain, if possible, knowledge of the cause of yellow fever, a knowledge which the most complete history of the epidemic that can be made will not be able to furnish.”

While the proceedings may have taken reasonable hold on the attention of medical men and women, the New York Times reported numerous complaints about the lengthy, anecdotal, and inconclusive character of many of the reports and noted early departures from the convention. Rising to a point of privilege on the morning of the third day’s session, Major William T. Walthall of Mobile, a yellow fever volunteer who had served at the Market Street Infirmary in Memphis, probably voiced the sentiments of others present by protesting what he considered the waste of two days’ valuable time with inconsequential tedium. The major also questioned, somewhat callously perhaps in view of recent events, the importance of “whether Mrs. Jones’ little Annie died at No. 186 Grove-street, or whether she sickened there and afterward died at Mrs. Green’s, in Locust-street, or vice versa.”

Convention-weary by the meeting’s last day, November 22, and worn, perhaps, by an atmosphere of enmity and strife, those who endured to the end elected new officers for the coming year and heard final committee reports. Among the several committee presentations, however, it was the report of the resolutions committee that revealed clearly where the advantage lay in the fierce struggle for power between Woodworth and Billings. Deeming it “unwise and inexpedient to commit the association, at this critical period of public agitation . . ., to any definite form of organization of a public health service,” the report, in essence, called for the appointment of a legislative committee, itself having an executive committee empowered to act for the APHA during the upcoming session of Congress.

According to the account in the Post, this report was adopted. Then the resolutions committee reported a final resolution, also adopted, which set forth in unmistakable terms the APHA’s political position on public health organization in the United States: “That, in the deliberate judgment of this association, it is the duty of every state to establish and adequately maintain an efficient state board of health, and to as great an extent as practicable contribute to the protection of the public health within its own commonwealth, and to that of the whole country; that the power and duties of state boards of health should be so well defined by law and so fully provided for in the polity of state administration, that the sanitary interests and
protection of all places in the state shall be insured." With this ringing affirmation of states' rights, the 1878 Richmond meeting of the American Public Health Association adjourned sine die.

Surely, though, those who attended the Richmond convention must have ruminated concerning the meaning of all they had heard as the wheels of their trains clacked away the miles toward home. Reviewing the body of conflicting evidence and opinion, the New York Times noted editorially that enlightenment on the question of yellow fever lay somewhere in the future. "It is not reassuring, however," the writer continued, "to find men who have already studied the subject for years, with the ampest of opportunities, and have evidently made up their minds with a great deal of positiveness, diametrically opposed to each other on the most essential point of all. The question whether the disease is indigenous in the cities which have been afflicted by it, or is imported from elsewhere, involves the whole matter of public policy in relation to its treatment." Nonintercourse with tropical ports from April to November was hardly a viable option. "But one conclusion may be adopted," the writer asserted, "regardless of varying theories, and that is that foulness of air and water, filthy streets, and bad drainage are inconsistent with public health, and have much to do with the conditions favoring the yellow fever epidemic, whether it has its immediate origin in them or springs from seeds imported and sown there." In other words, until the day that yellow fever's mysteries were revealed, it was but simple prudence to pursue those measures whose basis lay in common sense, to do what could be done.

As the APHA convention drew to a close, the epidemic in Louisiana was just ending, but an atmosphere of crisis remained in New Orleans. Following the termination of previous epidemics, trade and other forms of business activity had resumed briskly, and the prevailing atmosphere of crisis dissipated quickly as those citizens who survived, and those who returned, redirected their attention to customary and routine concerns of everyday life. In 1878 there was also a smart resumption of business in the city's shops and stores; one Canal Street dry goods merchant made sales amounting to five hundred dollars on November 4, half of them for cash. Yet by mid-November the large firms involved in the port's interior and foreign trade, either directly or indirectly, which collectively constituted the bulk of New Orleans's commercial interests, had missed the greater part of an entire business season. Prospects for the resumption of trade, especially the interior commerce with the lower Mississippi Valley, were exceedingly bleak. The great epidemics of the past had
followed a pattern of successive years, and there were many who apprehended that the disaster of 1878 would be followed by yet another in 1879. Under these circumstances, together with the epidemic's devastating impact on some of the city's most cherished myths, the atmosphere of crisis not only remained unabated but also became more intense.

The strongest apprehensions of impending calamity were felt by the city's leading businessmen. Dr. Choppin and the Louisiana State Board of Health had gone on record before a national audience to the effect that the only certain protection for the country from yellow fever lay in absolute nonintercourse between New Orleans and ports where the disease was indigenous for seven months out of the year. Moreover, health authorities in other states held the Louisiana board suspect, and there was no protection against the shotgun quarantines that could, and would, be posted by interior communities on the basis of rumors circulated by ruthless competitors. On the evening of November 21, between seventy-five and one hundred prominent merchants, representatives of commodity exchanges, manufacturers, bankers, insurance men, and attorneys met in the New Orleans Chamber of Commerce rooms above the Louisiana National Bank on Common Street. As announced in the morning papers, the purpose of the meeting was to hear and consider a report by the Chamber of Commerce Committee on Quarantine. Proceedings began with the formal election of a presiding officer, a secretary, and other officials. Then Forrester Dolhonde, a cotton broker who served as chairman of the Peabody Subsistence Association during the epidemic, rose to read the committee's report.

He began by saying that New Orleans businessmen presently found themselves in "circumstances of peculiar and unprecedented commercial embarrassment." Reviewing the history of the preceding twenty-three years, Dolhonde noted that when the Louisiana quarantine law was enacted in 1855, the principal means of foreign transport was by sailing vessel. At that time New Orleans held its customers in the Mississippi Valley in commercial captivity. The imposition of quarantines or even the outbreak of a severe epidemic meant only a postponement rather than a loss of profits. Any costs of delay were easily marked up in prices of goods and commercial services, and the city's customers could do little more than complain. During the intervening years, however, in the period known as Reconstruction, the bonds of captivity were broken by railroads linking the Mississippi Valley directly with the commercial ports of the East. Moreover, faster oceangoing vessels facilitated the importation of dis-
ease, and railroads accelerated its distribution in the interior. "At present," Dolhononde observed, "men and merchandise are moved with the fatal celerity of steam."44

The cotton broker then turned to an assessment of quarantines during the epidemic just ended, their impact on the city’s commerce, and prospects for the foreseeable future. Beginning in June 1878 the Louisiana State Board of Health had placed a virtual embargo on New Orleans’ tropical commerce, especially its growing fruit trade, which resulted in a redirection of that trade to eastern ports. Following the news that yellow fever had broken out in New Orleans, interior communities established quarantines against the city that interdicted business correspondence as well as goods. During this blockade, said Dolhononde, "we filled no orders except for nurses, physicians and caskets for the dead." Meanwhile, business that normally came to New Orleans went to interior rail centers that connected with the East. By the end of the epidemic, instead of rushing to its counters, most of the city’s former customers had disposed of their crops and purchased their supplies elsewhere. Worse yet, prospects for the immediate future looked very grim. The state board of health had given notice of its intention to practically close the trade with tropical ports from April to November. Under the existing Louisiana statute, parish police juries were empowered to establish quarantine against any source of disease, even New Orleans, and such action was believed to be inevitable. Modification of the law, much less its repeal, was considered out of the question. "In like manner," Dolhononde added, "we may expect a repetition of the blockade of our intercourse with the interior."45

Thus, the encircling coils of state and local quarantines foreshadowed the commercial doom of New Orleans. In the considered judgment of the Chamber of Commerce Committee on Quarantine, the only prospect for relief lay in congressional legislation that would invoke the powers of the federal government. "As they have been extended by the war," Dolhononde told his listeners, "there can be no doubt that any measure necessary for the general welfare of the Union would justify any legislation to carry into effect the grandest powers so constructed." Earlier in the year, on April 29, President Hayes had approved the Quarantine Act of 1878, which assigned certain responsibilities to the surgeon general of the U.S. Marine Hospital Service. But the weak law made no appropriation for any government activity, and it prohibited federal infringement on the police power of state and local health authorities.46 The committee, however, believed that Congress, under its authority to regulate
commerce with foreign nations and among the several states, might enact a uniform quarantine law that would preclude arbitrary state and local measures and provide regulations governing foreign trade that would apply to all American port cities equally. The cotton broker concluded his presentation by reading six resolutions the committee proposed for adoption. One of them provided for the appointment of a select committee of citizens that would "use its best efforts to obtain from Congress, at its next session, such enactment as shall secure a uniform law of quarantine and regulating the foreign and inland commerce among the States." The resolutions were adopted unanimously.47

On December 2, 1878, the third session of the Forty-fifth Congress convened in Washington and received President Hayes's annual message. During the course of his address, the president commented on the great southern yellow fever epidemic just ended and observed that

the fearful spread of this pestilence has awakened a very general public sentiment in favor of national sanitary administration, which shall not only control quarantine, but have the sanitary supervision of internal commerce in times of epidemics, and hold an advisory relation to the State and municipal authorities, with power to deal with whatever endangers the public health, and which the municipal and State authorities are unable to regulate. The national quarantine act approved April 29, 1878, which was passed too late in the last session of Congress to provide the means for carrying it into practical operation during the past session, is a step in the direction here indicated. In view of the necessity for the most effective measures, by quarantine and otherwise, for the protection of our seaports and the country generally from this and other epidemics, it is recommended that Congress give to the whole subject early and careful consideration.48

The same day, three southern senators, Isham G. Harris (D., Tenn.), James B. Eustis (D., La.), and Lucius Q.C. Lamar (D., Miss.), whose states were the most severely stricken during the epidemic, offered resolutions in the Senate that marked the beginning of a congressional struggle over national health legislation.49

Whatever Hayes's policy toward the South may have been in 1877, the climate of American politics in the winter of 1878–79 did not bode well for southern Democrats already divided among themselves.50 Nevertheless, in line with the APHA's recommendation at the Richmond convention, the resolutions offered by senators Harris, Eustis, and Lamar on December 2 proposed to establish a congressional leg-
islative committee that would continue the investigation of the recent epidemic. The Harris and Eustis proposals specifically called for a joint committee on which the Senate and House would have equal representation. During debate in the Senate, Harris defended the idea of a joint committee on the ground that it would eliminate duplication of effort. On December 4, however, the Senate amended the Harris resolution and established a Senate Select Committee on Epidemic Diseases to be composed of seven senators whose responsibility would be to investigate the epidemic and report on the best means of future prevention. The committee was authorized to meet and act jointly with a similar committee from the House. On December 5 James A. Garfield (R., Ohio) reported a resolution proposing a joint committee of five representatives and four senators to investigate the epidemic. The House approved the format of a joint committee, but the Senate failed to concur. Subsequently, the House appointed its own Select Committee on Epidemic Diseases.

On December 18 the two committees sat jointly and appointed a Board of Experts consisting of eleven physicians and a civil engineer to assist in the investigation. Surgeon General Woodworth was designated president ex officio of the board, which included three members of the voluntary Yellow Fever Commission: Dr. Bemiss, Dr. Cochran, and Colonel Hardee. The other members were all medical men, five of them from the South, including, at the insistence of the American Institute of Homeopathy, one homeopathic physician. The board's major responsibilities, like those of its predecessor, the Yellow Fever Commission, were to determine whether the disease was indigenous or imported and to recommend preventive measures. Also, like the commission, the board would have to work hastily, for it was instructed to conduct an investigation within four weeks before returning to Washington on January 15, 1879, in order to summarize conclusions and prepare a report. Both the lay and the medical press throughout the country expressed general approval of Congress's action. But the editor of the anticontagionist, antiquarian Atlanta Medical and Surgical Journal was apprehensive about the outcome. He hoped that the members of the Board of Experts would take an unbiased approach to the investigation. "With Dr. Woodworth at the head, however, and two of the commissioners as leading members of the Board, we fear that not only the same plan of work will be adopted, but that a similar report will be made."

The day after Christmas, the Board of Experts convened in Memphis to receive investigative assignments from Woodworth. Then on December 30 a subcommittee of the Senate and House committees,
assisted by the surgeon general and four members of the board, began hearings at the St. Charles Hotel in New Orleans. At the opening session, Senator James Eustis, the subcommittee chairman, told those present that “acting under the orders of Congress” the first question to be settled was “What is necessary for the prevention of future epidemics[?]” When that issue was disposed of, he added, “the commission could afterward make a report to Congress on the history and features of the last epidemic.”

Between December 30, 1878, and January 7, 1879, members of the Board of Experts, repeating the steps of the Yellow Fever Commission, conducted a house-to-house canvass of New Orleans, leaving forms at each household to be returned with information concerning cases of yellow fever and dates. Meanwhile, the subcommittee heard testimony from the city’s leading physicians and businessmen. The doctors’ opinions, which conflicted sharply, ran the entire gamut of contemporary etiological thought, and all that had been said in Richmond scarcely a month before was said again. Membership on the Louisiana State Board of Health required adherence to the contagionist theory and a zealous commitment to quarantine. Therefore, Dr. Choppin and his associates stated their conviction that yellow fever had been imported in 1878 but expressed preference for existing quarantine arrangements under state control.

Other prominent physicians, including Dr. Daniel C. Holliday and Dr. William H. Holcombe, the chairman of the Homeopathic Yellow Fever Commission, placed little faith in quarantine and attributed the epidemic to the city’s grossly unsanitary condition. Dr. Charles B. White, former president of the state board of health and a founding member of the APHA, attested to his belief that both quarantine and environmental sanitation were necessary preventive measures. One city newspaper summed up several days of inconclusive medical testimony with the acerbic observation that “committees always find out something by examining witnesses who know nothing.” The businessmen, by contrast, were neither uncertain nor ambivalent. At the subcommittee’s final session on January 7, Colonel William M. Burwell, the former editor of DeBow’s Review, a member of the Chamber of Commerce Committee on Quarantine, and an intelligent, articulate spokesman of the New South, gave persuasive testimony strongly favoring the establishment of a federal quarantine.

The Board of Experts presented a report, dated January 30, 1879, of its conclusions to the Senate and House committees on epidemic diseases. Those who had been doubtful about the outcome, like the editor of the Atlanta Medical and Surgical Journal, were probably
not surprised, for it contained little more than a rehash of the earlier Yellow Fever Commission report. "It should be borne in mind," said the experts, "that these conclusions are based upon the evidence of a necessarily incomplete investigation of the epidemic—incomplete because of the urgent demands for public health legislation during the present session of Congress; otherwise the Board might not be held excusable for the seeming haste in dealing with this great subject."\textsuperscript{59}

Aside from general estimates of the number of cases, deaths, and financial losses resulting from the epidemic, no significant facts were presented in the small, forty-five-page pamphlet. Nevertheless, the experts maintained that yellow fever was introduced into the United States exclusively by importation. In their judgment, the best means of prevention was a national quarantine system employing medical inspectors in foreign ports, along with federal supervision of domestic quarantine facilities and the movement of persons and goods in interstate commerce.\textsuperscript{60} It was a political, not a medical, document, and for political purposes the brief report said everything that the southern congressional leaders from the river and Gulf states could have wished.\textsuperscript{61}

The ensuing legislative battle matched the southerners and their ally Dr. Woodworth, the ambitious surgeon general of the U.S. Marine Hospital Service, against the politically powerful forces of the American Public Health Association, which was also backed by the American Medical Association. Senator Lamar unveiled the southern strategy on December 10, 1878, well before the Board of Experts's investigation, when he offered a bill (S.R. 1462) to establish a national bureau of public health. Under its provisions, the bureau would absorb the responsibilities and functions of the U.S. Marine Hospital Service and exercise national supervision over both quarantine and sanitary affairs. The new agency would be headed by a director general of health, an officer having cabinet rank, appointed by the president and subject to Senate confirmation.\textsuperscript{62}

Lamar's bill was immediately and bitterly attacked by the APHA lobby and its allies in the medical press. Strong objection was made to the extensive powers granted to the director general and to Woodworth's candidacy for the post. The Philadelphia Medical Times's statement that "without intending to be in any way more personal than is absolutely demanded by the circumstances of the case, we feel required to state that the great mass of the thinking portion of the profession would at once recognize the unfitness of Dr. Woodworth for such a position" appears to have been politically motivated.\textsuperscript{63}
Meanwhile, in early January, Billings, Toner, and Dorman B. Eaton, of the APHA's legislative executive committee, distributed a memorandum bearing the imprimatur of the American Public Health Association to the members of Congress, characterizing the Lamar bill as both premature and dangerous: "We would state that in our opinion the true interests of public health and sanitary science in the United States are in grave danger at the present time, and that it is the duty of all professional and scientific men, both as individuals and members of learned societies, to endeavor to prevent premature legislation, which is now threatened, but which we believe the great majority of our National Legislators will oppose if properly informed upon the subject."64 Billings, Toner, and Eaton then drafted a bill proposing the establishment of a provisional national health commission that would recommend legislation at the next session of Congress, a move that would have merely codified the report of the APHA's resolutions committee presented at the closing session of the Richmond meeting. It was, in effect, a device to block Woodworth and the southerners. On January 21, 1879, the APHA bill (S.R. 1663) was introduced in the Senate by a staunch southern defender of states' rights, Robert E. Withers (Cons., Va.).65

Among the southerners' friends in the Senate was Stanley Matthews (R., Ohio), an uncle of Henry Watterson, the editor of the Louisville Courier-Journal, and a kinsman of President Hayes.66 The same day the Withers bill was announced, Senator Matthews introduced a modification of the Lamar bill designed to appease its opponents. By the terms of the Matthews bill (S.R. 1665), the proposed bureau of public health would be under the Treasury Department, and its director general would share administrative authority with a board that included the chief medical officers of the military services. This trimmed the authority of the director general, but otherwise the bill provided for a strong federal agency with broad authority over sanitary matters and quarantine. Both the Withers and the Matthews proposals were referred to the Senate Select Committee on Epidemic Diseases, where the Lamar bill was still pending, without debate.67

Up to this point, Congress had not yet received any specific data bearing on the yellow fever epidemic of 1878 with which to work. On February 6, 1879, Senator Harris, the chairman of the Senate Select Committee, reported a joint resolution "requesting Drs. Bemiss and Cochran and Engineer Hardie [sic] to complete their reports upon the yellow-fever epidemic of 1878 for the use of Congress." Then the following day Harris reported his own bill (S.R. 1784) out of the committee "to prevent the introduction of contagious or infectious
diseases into the United States and to establish a bureau of public health." The House version of the Harris bill (H.R. 6447) was introduced on February 17 by H. Casey Young (D., Tenn.) along with a joint resolution "requesting Surgeon-General Woodworth to complete the reports of the yellow fever commission organized by him to investigate the yellow-fever epidemic of 1878, and to present the same, together with the completed reports of the board of experts, for the use of Congress."68

The Harris bill closely resembled the measures sponsored by senators Lamar and Matthews, and like the ill-fated Evans-Ramsey bill in 1866, it discovered authority for federal quarantine under the Constitution's commerce clause.69 The Tennessee senator proposed to establish a national bureau of public health headed by a director general. Under this executive officer there was to be a seven-member board appointed by the president with the advice and consent of the Senate. The chief medical officers of the army and navy were to have ex officio status only, and the U.S. Marine Hospital Service was to be abolished. Authority to formulate uniform quarantine rules and regulations was to be vested in the bureau.70 During the bitter debate on the Harris bill, some senators expressed reluctance to establish such a powerful agency. Its advocates insisted, on the other hand, that circumstances required decisive action. Senator James Beck of Kentucky reminded his colleagues that they could subsequently reverse their action, but if an epidemic recurred in 1879, they would have to explain to their constituents why they had done nothing.71 In an effort to win over hesitant lawmakers, Senator Eustis of Louisiana proposed an amendment to the Harris bill that limited the existence of the national bureau to four years. Following adoption of the Eustis amendment, the bill passed in the Senate by voice vote on February 24, 1879.72

With little more than a week remaining in the third session of the Forty-fifth Congress, the outcome was decided in the House of Representatives. The day the Harris bill passed the Senate, the APHA mounted an all-out lobbying effort behind a House bill introduced by Representative Jonas H. McGowan (R., Mich.). Like the Withers bill in the Senate, the McGowan bill (H.R. 6500) proposed to establish a nine-member provisional health commission under the Treasury Department, which was to include the heads of the army and navy medical services ex officio but excluded representation by the U.S. Marine Hospital Service altogether. Its limited functions were restricted to investigation of matters relating to public health, an advisory relation to federal departments and state governments, and
responsibility for reporting to Congress a plan for national health administration. It also mandated cooperation by the National Academy of Sciences with the proposed commission in formulating a plan for "a national public health organization." Thus, initially, the APHA bill did not provide for a federal health agency as such, but would merely confer official status upon the legislative committee approved by the organization at Richmond.

After the Harris and McGowan bills were reported, the Post sought out Surgeon General Woodworth and published the content of an interview the next day, February 25. Virtually conceding defeat, Woodworth told the reporter that "when [the Harris bill] reaches the House it seems probable that all but the title will be stricken out and the House [McGowan] bill substituted." That was, in fact, what subsequently occurred. Woodworth then went on, in response to the reporter's questions, to criticize the APHA's political role in the whole affair. That same day, in a note marked "Private and Confidential," Billings called Toner's attention to the Woodworth interview in the Post and added: "I think it ought to be answered, and by you as Chairman of the [APHA legislative] Advisory Committee." Attached to the note was a two-page memorandum, which Toner was instructed to destroy, that Billings began by describing the surgeon general's statement as "sublime in its impudence." Woodworth's devious scheme to grasp power was clear to Billings, who did "not wish to see the Public Health interests of the Country connected with politics, or placed in the hands of men who have given no evidence of special knowledge on sanitary subjects." The surgeon general, in other words, was an incompetent intruder, an interloper in the affairs of the elder statesmen of the public health movement, and therefore "is not a proper person to be selected to rule over [the APHA] or to be entrusted with such important interests as those he is seeking to grasp."

Referred to as the "Public Health Association bill" in debate, the McGowan bill was clearly designed to thwart Woodworth's ambitions and the southerners' hope of establishing a strong federal agency with national quarantine power. With the Harris bill doomed to defeat in the House, Representative H. Casey Young offered a milder substitute measure on March 1, arguing "that he had fought for four years in trying to make the states greater than the Federal Government, and that effort ha[d] cost millions of lives, and this effort made today [the APHA bill] to establish the superiority of the state, if it resulted in defeating the [Young] bill, would result in the loss of many more lives." Young's measure went down to defeat that
Saturday night, and the next morning, Sunday, weary House members met at 9:30 to consider, among other business, the remaining McGowan bill. As the proceedings got under way, no doubt some representatives were startled when an elderly man rose in the north gallery and announced: "The wicked shall be cast into hell and all the nations that forget God. You are dishonoring God to-day, and may he forgive you for it." In the view of the New York Times, the House members at least dishonored themselves by what it described in front-page caps as "DISGRACEFUL WRANGLING AND UPROAR." With but a few hours remaining in the session, however, the House passed the McGowan bill by a vote of 170–64. The same night, March 3, 1879, during a wild and turbulent closing convocation, the bill passed in the Senate by voice vote and was approved by President Hayes. At this time Congress had not yet received specific information concerning the devastating epidemic that prompted its legislative action.

With his reputation tarnished and ambitions crushed, Surgeon General Woodworth died eleven days later, on March 14, quite possibly a suicide. Stephen Smith, the founder of the APHA and its guiding spirit for half a century, later made the comment that with Woodworth's death "all opposition ceased." In the surgeon general's successor, John B. Hamilton, Billings found a formidable adversary indeed. Hamilton answered Smith's assertion in testimony before a congressional committee by stating that Smith "might have said that Dr. Woodworth's death was the result of persecution" and that Woodworth "was hounded to his grave by some of the same 'sanitarians' who became the temporary beneficiaries of that cessation of opposition."

Following Woodworth's death Senator Harris and Representative Young resumed their efforts during the first session of the Forty-sixth Congress with legislative proposals designed to salvage the southern loss by investing the newly established National Board of Health—on which James Lawrence Cabell and John Shaw Billings held the same offices they held in the APHA—with quarantine powers. Newspapers in New Orleans, Memphis, and Atlanta endorsed the idea of a strong federal health agency. The Atlanta Medical and Surgical Journal opposed a federal quarantine law, but in the spring of 1879 the Atlanta Constitution renewed its support on the ground that the state of Georgia had abandoned its duty:

The health of the people must be protected, and it certainly does not lie in our mouths to complain if congress should deem it necessary to do what
the legislature of Georgia has deliberately undone. Once upon a time we had a state board of health composed of our best physicians—gentlemen who were patriotic enough to give their time and their labors without pay, but the general assembly, bowing to the will of the Potiphar Peagreens, and conceiving that a sanitary board was an ornament that the people could do without, refused to appropriate money enough to pay the salary of the secretary. This is the patriotic result of state legislation upon the subject. The legislature having proved itself ignorant and incompetent with respect to providing sanitary safeguards for the people, we have no other recourse than to depend upon the federal government. . . . For our part, we are willing to promote federal interference in behalf of the health of the people—particularly when our representatives practically abolish the sanitary powers of the state and boast of the fact as a feat of economy.87

Despite a studied lack of enthusiasm on the part of the APHA-controlled National Board of Health for quarantine responsibilities, Harris and Young succeeded in securing the enactment of a federal quarantine law signed by President Hayes on June 2, 1879.88 Just how the national board would administer its new responsibilities for quarantine, however, remained to be seen.

The investigation of the yellow fever epidemic in 1878 and the struggle over national health legislation during the fall and winter of 1878–79 were governed by political and personal considerations to which the issue of public health was altogether secondary. Southern debt, poverty, and the retrenchment policies of the Redeemer governments recommended the contagionist theory of disease causation and a national quarantine at federal expense.89 The anticontagionist theory, on the other hand, implied support for state and local boards of health as well as environmental sanitation projects, outlays appropriate to a prosperous region whose people and their representatives in Congress desired that the South pay its own way. According to John Duffy, a major reason for northern opposition "lay in the fact that local quarantine systems were a lucrative source of income for cities and states and an equally valuable source of political patronage."90 The determination of which approach would prevail had little to do with whether or not yellow fever was imported or indigenous. Had they been available to Congress, it is doubtful that the detailed reports of the Yellow Fever Commission and the Board of Experts would have affected the outcome.

More important, unfortunately, were the personal jealousy and rivalry between Surgeon General John M. Woodworth and John Shaw Billings, together with maneuvering and intrigue on the part of U.S.
Marine Hospital Service personnel and medical officers of the army and navy. In its political and constitutional aspect, the struggle found the southern proponents of a strong federal health agency in the role of nationalists contending against northern defenders of states' rights. 91 To the leaders of the American Public Health Association, the ongoingness of the sanitary movement depended upon maintaining the state's implied police power to preserve and protect the public health. 92 But it was relief from precisely that power that the merchants of New Orleans, and those of Memphis for different reasons, sought in the commerce clause. The regulatory implications inherent in the southern strategy, moreover, were not missed by the northern representatives of railroad and industrial corporations. To them, the constitutional issue was of paramount importance, and they fought bitterly to protect the rights of states in health matters against federal encroachment. In their effort the southerners banked heavily on the ambitious surgeon general of the U.S. Marine Hospital Service, and they lost.
During the 1880s civic leaders in the urban South finally embraced the anticontagionist sanitary doctrines that had guided the American public health movement from its inception nearly a half century earlier. In doing so, considering that yellow fever threatened the cities' economic survival and the continuing mystery of its etiology, it would appear that they had little choice. Only in later times, and under different political circumstances, would the idea of a strong federal agency having broad responsibility for public health receive national acceptance.
The failure of the southern quest for national health legislation in March 1879 produced what the leading men of New Orleans regarded as a state of extreme emergency. As the Louisiana State Board of Health prepared to impose a severely restrictive quarantine on the city's Caribbean trade, state and local boards of health in the Mississippi Valley made ready to take similar defensive measures affecting the region's commerce with New Orleans. Then on March 3, 1879, the day Woodworth and the southern congressmen met defeat, the nightmarish prospect that the city's businessmen had envisioned the preceding November—that the great port would again be completely shut down—loomed again in a vehement New York Times editorial entitled "Inviting the Pestilence."

There were credible reports, the Times alleged, that yellow fever had survived the exceptionally mild southern winter and that fatal cases were already occurring in New Orleans and Memphis. Moreover, the New York newspaper contended,

The local authorities of New Orleans and Memphis have, with amazing supineness, neglected to do anything to prevent a repetition of the terrible experience. Their doctors and health officers have been ready to give opinions and discuss theories regarding the origin, treatment, and prevention of the epidemic, but nothing has been done to secure its extermination, and put the cities in a condition to resist future attacks. . . . The excuse, or rather the pretext, for this general neglect, seems to be that the Boards of Health have not been furnished with means to carry on the work that belongs to them, and the local authorities have done nothing, because it would cost something to put the cities in a proper sanitary condition. It is the same plea of poverty with which they seek to justify a repudiation of their debts. They cannot afford to be either honest or cleanly, and are consequently doomed to commercial decay that is the inevitable result of distrust and the periodical prevalence of destructive epidemics. In the long run they will find this to be ruinous economy. Security of capital and security of life are essential conditions of material prosperity.

But this is no matter of merely local importance. A yellow fever epidemic in any Southern city is a menace to every place that holds communication with it. It compels those who are not responsible for its existence
to take troublesome and costly precautions against it; it disorganizes industry and disturbs trade, thereby entailing general loss, and it makes drafts upon the resources, as well as the sympathies and fears, of the whole country. If these cities cannot be made by the force of public sentiment and considerations of self interest, to fulfill their obligations to themselves and the country, by doing their part toward guarding against the outbreak and spread of a disease which all the authorities pronounce preventable, it behooves the national authority to make rigid regulations for internal as well as external quarantine. Its powers in this regard depend upon its right to regulate commerce, which is as complete in respect to communication between States as to that with foreign countries. The only means the country will have for protecting itself will be to provide for the complete isolation of districts within which a dangerous epidemic is raging, by the interruption of all inter-State communication with it.¹

Even before the *Times* philippic, however, the New Orleans Medical and Surgical Association, representing the overwhelming majority of the city’s physicians, made a momentous announcement: “In order that our own people and the people of this country (at large) may not be misled by our silence, thus taking it as an endorsement of these [quarantine] schemes as proposed, [we] deem it proper to come forward and enter our protest against such measures and to suggest such means as we believe can alone render New Orleans a healthy city and free it from epidemics of yellow fever.”²

Previously divided among themselves over conflicting theories of disease causation, under the threat of economic disaster the doctors spoke with one voice. They now stated that yellow fever was a specific disease, resulting from a specific cause, that had once been exotic but was now domesticated or endemic. Since quarantine had never prevented the occurrence of either isolated cases or epidemics, the physicians protested “against the present system of quarantine or any one similar to it, or absolute non-intercourse,” and could “only endorse such a system of rational quarantine as shall cause least interference with our commercial relations and afford at the same time all the possible protection we can expect.” Their “almost certain conviction” that yellow fever was endemic in New Orleans depended on “certain ill understood climatic conditions and certain well understood defects in sanitation.” So defective was the city’s sanitary condition, said the doctors, that it was a wonder yellow fever and other pestilences did not prevail the year around. Therefore, “as absolutely necessary” preventive measures, the New Orleans Medical and Surgical Association recommended proper drainage of the city, including an underground sewer system and abolition of the privy; paving and
The New Orleans Sanitary Association

cleaning of city streets together with efficient disposal of garbage in the Mississippi River; and a safe and adequate municipal water supply. These recommendations outlined a comprehensive program of sanitary reform.

Following private discussions of the recommendations among the city's leading merchants, a call signed by nine of them went out to the citizens of New Orleans on March 31, 1879. The previous year's epidemic had inflicted great losses upon the community, said the merchants, and its people should know that their city's future depended on preventing a recurrence. Despite its strategic location and the skill and enterprise of its businessmen, New Orleans, as long as it was haunted by yellow fever, was certain to decline. Moreover, "right or wrong," cities and towns in the interior valley blamed the Crescent City for the miseries they suffered in 1878. The least prospect of an epidemic in New Orleans would excite those communities to invoke severe quarantines and thus shut down the port. But the merchants could see no reason, considering its many advantages, why New Orleans should not rank among the healthiest cities in the Union. "We are convinced it only needs intelligent, united and determined action on the part of our people to secure entire exemption from yellow fever, or such a mitigation of its outbreak as to render alarm unnecessary."

The impoverished condition of the city government and the state board of health required action by the public. What the merchants desired to do was to assist the city government and the board of health by creating a civic sentiment in favor of sanitary measures and then, with funds provided through voluntary contributions, helping to carry them into effect. "Citizens must encourage and sustain the men whom they have trusted with the grave responsibility of public health. These gentlemen should be made to feel that they are seconded and sustained by the intelligence, patriotism and wealth of the community." The merchants then called for a meeting to be held that evening in Odd Fellows' Hall for the purpose of organizing a permanent citizens' committee that would help with the work of sanitary reform. "Beginning promptly now, let us put our hands to the work and do all that an intelligent people can do, with God's help, to preserve health and its blessing to the people. It is the part of philanthropy, of common sense and of self-interest."

With William C. Black representing the New Orleans Chamber of Commerce in the chair, the meeting of more than two hundred business and professional men was first addressed by the Reverend Hugh Miller Thompson, the rector of Trinity Episcopal Church. General
Cyrus Bussey, president of the New Orleans Cotton Exchange, spoke briefly, as did Mayor Isaac W. Patton and others. Then the "faithful two hundred" (as city newspapers frequently referred to them over the years), including leaders of commercial exchanges, representatives of steamship and railroad companies, manufacturers, lawyers, physicians, educators, and clergymen, proceeded to organize the New Orleans Auxiliary Sanitary Association. Charles A. Whitney, son-in-law of Charles Morgan and director of the Morgan railroad and steamship interests, was elected president. Among nine vice presidents chosen were General Bussey; Adolphe Schreiber, a prominent Creole merchant; Albert Baldwin, railroad developer and president of the New Orleans Water Works Company; and Edward Fenner, a partner in the saddlery firm of Horter and Fenner, who over the next eight years would provide the organization's principal leadership. In addition to General Bussey, who served as its chairman, the executive committee included Baldwin; Fenner; Fenner's partner, George Horter; Simon Hernsheim, tobacco manufacturer; Ernest Kruttschnitt, attorney; and William B. Schmidt, perhaps the wealthiest merchant in New Orleans. Baldwin, Schmidt, Hernsheim, Horter, and Fenner were also members of the finance committee. Colonel William M. Burwell, a former editor of *DeBow's Review*, an exponent of New South ideals, and a leading produce dealer, was elected corresponding secretary, and Henry Ginder, a former Howard Association officer and a jewelry broker for the firm of Hyde and Goodrich, was named treasurer.

The organization's charter, which provided for the incorporation of the New Orleans Auxiliary Sanitary Association for a period of twenty-five years, its bylaws, and its elite membership all indicate that the ASA was a direct descendant of the local Howard Association. The new organization also reflected the influence of the early British sanitarians and of the movement's leaders in America. As its motto the ASA adopted the maxim of England's Health of Towns Association, "Public health is public wealth." For guidance and practical advice the ASA relied heavily upon two well-known Northern sanitarians: Dr. A.N. Bell of Brooklyn, New York, a major figure in the American Public Health Association and editor of *The Sanitarian*; and Dr. Henry I. Bowditch of Boston, Massachusetts, the first president of the Massachusetts State Board of Health and an outspoken advocate of "state medicine." Both men recommended a cooperative relation between voluntary associations and the medical profession in the interest of achieving public health goals.

On April 3 the ASA's executive committee announced the appointment of Dr. Charles B. White, president of the Louisiana State Board
The New Orleans Sanitary Association

of Health from 1869 to 1876 and an influential member of the APHA, as the association's sanitary director. From the beginning the ASA had the support of the New Orleans Medical and Surgical Association and its official organ, the New Orleans Medical and Surgical Journal. Among the medical society’s members there was no more forceful exponent of the doctrines of state medicine than the longtime local advocate of sanitary reform and member of the congressional board of yellow fever experts, Dr. Stanford Emerson Chaille. In New Orleans, as in England and New York, physicians played a major role in the sanitary movement.

During the weeks following the organizational meeting on March 31, the ASA appointed neighborhood health wardens, formed ward sanitary committees, and publicly announced its goal to be the implementation of the New Orleans Medical and Surgical Association's recommendations. The cost of “entire and radical” changes in the city's drainage, garbage disposal, and water supply was estimated at one hundred thousand dollars. On April 17, in keeping with a long-standing community tradition, the ASA made a public appeal for contributions. Assuring their fellow citizens that “the fortunes and future of our city are in the balance,” the sanitarians announced that subscription committees were already canvassing every business house from bank to saloon and called upon all citizens to give generously. The public was further assured that the ASA leadership's personal reputations and prestige were guarantees of honesty and integrity. Promising full public accountability for funds, the appeal also stressed that the money contributed would serve a dual purpose. First, it would be used according to sound principles of business management to improve sanitary conditions throughout the city. From the return in improved community health, all would profit. Second, much if not most of the money would be returned to the community by the employment of men hired to work on the ASA's sanitary projects. Finally, the ASA urged both the economy and the necessity of its plan: “It is noble and humane to contribute, as our people did last summer their thousands to nurse and care for the indigent sick. It is no less noble and humane, and far wiser to contribute their tens and hundreds now to prevent such sickness and misery again. . . . The eyes of the country are upon us at this moment. Let us resolve that no effort of ours shall be lacking.”

Provided with offices in the Morgan Railroad Building at the corner of Natchez and Magazine streets, ASA members worked feverishly from mid-April throughout the summer of 1879 in a short-term effort to secure enforcement of the municipal sanitary ordinances and abatement of the city’s most glaring nuisances. Fearing but hoping to
prevent the recurrence of another yellow fever epidemic, the ASA instructed its ward committees to note and report violations of sanitary ordinances. Complaint books were opened at the ASA office in which individual citizens were urged to register reports of neighborhood nuisances. As contributions began to come in, the association employed ten policemen—specially appointed by Mayor Patton as sanitary officers—whose duties were to enforce the law and assist the board of health's district inspectors in accomplishing a sanitary survey of the city. Meanwhile, using drays and tools loaned by the city's largest hardware firms, the association's committee on streets and levees employed gangs of laborers to fill in low-lying city lots, some fifteen acres of stagnant "fever holes" on the river levee, and the notorious Locust Grove pauper cemetery. The committee also hired other crews to clean the streets, scrape out street gutters, and remove offal and garbage. By the fall of 1879 the ASA's prodigious labors had won ringing praises from northern leaders of the public health movement.  

The drive behind the sanitarians' furious activity was the threat of another epidemic. When yellow fever broke out again in Memphis on July 9, the Louisiana State Board of Health promptly declared quarantine against the Bluff City, and the ASA redoubled its efforts. Despite local precautions, however, forty-one cases of yellow fever were reported in New Orleans during the summer of 1879, of which nineteen terminated fatally. Among those stricken in late August were the famous Confederate warrior General John Bell Hood, his wife Anna, and their daughters Lydia and Ethel. Of the four, only Ethel survived. Nevertheless, the fever's failure to reach epidemic proportions was credited to the work of the ASA. The year before, in 1878, the Howard Association expressed the New South doctrines of reconciliation and union by giving thanks for "a brotherhood wider than birthplace and a patriotic sympathy as ample as the bounds of our common country." To these precepts were added the gospel of work, health, and economic progress that was proclaimed in the city's pulpits and in its press. In its annual commercial edition on September 1, 1879, the Daily Picayune urged citizens to sustain the work of the ASA and thereby ensure a glorious destiny for New Orleans: "If we but join the earnest little band that has been fighting disease here at home, and endeavoring to cleanse the city and remove the causes which breed the pestilence; if we but make a determined effort to conquer the diseases of our climate, we shall have removed the only impediment that lies in the way. Money, brains, and energy can solve this problem, and we must use them liberally." With the
threat of an epidemic over for another year and with substantial short-run achievements to its credit, the ASA turned to the larger problems of drainage, garbage disposal, and water supply.

Among its recommendations for sanitary reform, the New Orleans Medical and Surgical Association assigned first priority to "proper drainage, underground sewerage, and the total abolition by law of the present system of privies." During the spring and summer of 1879 the ASA sought further advice from both the medical society and the state board of health. Contrary to the medical society's initial recommendation, a committee of physicians representing both the body and the board of health reported that underground sewerage was technically unfeasible for New Orleans. The committee also believed that the ubiquitous privy—there were at least twenty-six thousand of them in the city, in some instances one privy for three tenements—was the most dangerous of all hazards to community health and should be abolished. "Without this," the physicians urged, "all else that may be done is but leaving the work undone." They therefore recommended passage of a municipal ordinance requiring property owners to clean out and fill in privy vaults. The same ordinance would require property owners to provide a vented sanitary closet with an excreta container beneath the seat that could be serviced regularly by companies engaged in that business. Finally, the committee showed that this arrangement, known as the Rochedale plan from its successful adoption in an English community, was both less expensive than privy maintenance and commercially profitable.

Meanwhile, the ASA furnished expenses for a trip to Chicago by the city surveyor, a civil engineer named Henry C. Brown, for the purpose of assessing the applicability of that city's Chesbrough sewerage system to New Orleans. In his subsequent report to the municipal authorities, Brown explained that the great differences between the sites of Chicago and New Orleans precluded local adoption of the Chesbrough system. Moreover, given the Crescent City's unique topography, adequate provision for surface drainage—a major necessity—was not likely to be gained from subterranean sewers. In Brown's judgment the most promising course of action from the standpoint of engineering and economy lay in improvement of the existing system. This arrangement consisted of more than three hundred miles of street gutters, thirty-five miles of drainage canals, and four strategically located pumping machines, which theoretically forced surface drainage from the gutters through the canals and into Lake Ponchartrain. Since the interior surfaces of the gutters and
canals had never been properly revetted, these channels became clogged with subsurface seepage from privies and mud. Cleaning and clearing them was a never-ending task.

The engineer agreed with the medical committee that, as a prerequisite to making the system functional, the privy would have to be abolished by law. Then he recommended that the sides and bottoms of the gutters and canals be revetted or "boxed" with stone or planking and their embankments sown in grass. In order to maintain the system's cleanliness and efficiency, Brown proposed that two large pumping engines and sufficient pipe be acquired to flush the gutters continuously with river water during the hot season and on a daytime basis during cooler weather. The city surveyor put the cost of these improvements at $330,000, a sum more than three times the ASA's initial estimate of expenditures on all of its projects. 23

The sanitarians did not despair, however; instead, ASA leaders plunged the public contributions and generous sums from their personal resources into the recommended flush pumps and pipe. They also astutely divided their labors on drainage projects between two committees: one on flushing and another on canals. Meanwhile, the ASA suffered a major setback when it failed to obtain the recommended municipal ordinance outlawing the privy. As the result of opposition from property owners and vidangeurs (privy cleaning contractors), ASA vice president Edward Fenner had to acknowledge in 1880 "the possibility of the continuance of a privy system for an indefinite period." On the one hand, continued saturation and pollution of the subsoil by privy seepage was detrimental to health and to surface drainage; on the other, City Surveyor Brown's estimate of $2,500,000 as the cost of underground sewerage for New Orleans placed such a project beyond the means of the ASA. 24 In the spring of 1880 a friendly northern observer noted that "the New Orleans Auxiliary Sanitary Association continues to hold stirring meetings, and to push surface cleaning, but the work, without which, all else in that city is vanity and vexation of spirit, is to purge the soil: Sewerage and drainage cannot be postponed with safety." 25

Upon learning that Colonel George E. Waring, Jr., a former Union army officer and drainage engineer, had designed a unique and inexpensive sewer system for Memphis, the ASA invited him to consult on the sewerage of New Orleans. 26 Waring told the sanitarians that underground sewers were technically feasible for the city, but he emphasized that their success depended on compulsory connection for all property holders. Although the system would cost about $1,500,000, Waring believed the development could be profitable and
thus attractive to northern investors.\(^{27}\) In May 1880 nine incorporators including three ASA officers obtained a charter for the New Orleans Drainage and Sewerage Company. Along with a petition to the city council for an ordinance enabling construction of a sewer and drainage system, company directors submitted a rate schedule showing the charges that would be made on different types of buildings. Connection with the system was to be mandatory, but the council was assured that individual costs would not exceed the present expense of maintaining a privy. Upon passage of the ordinance, construction would begin, and the system would be completed in five years. The company offered its capital stock to the general public at one hundred dollars per share in December 1880, and Colonel Waring announced that he had been able to interest New York and Boston investors in the project.\(^{28}\)

In March 1881, however, the sewerage company encountered strong opposition from the *vidangeurs*, a group known as the Tax Payers’ Association, and Dr. D. Warren Brickell, a prominent New Orleans physician, who alleged that subterranean sewers were dangerous. Despite able refutation of Brickell's assertions and endorsement of the sewer project by the ASA, the board of health, and the Board of State Engineers, one newspaper noted that “our people are timid concerning innovations, and in the light of past legislation in this city, are perhaps justly so.”\(^{29}\) By an amendment to the proposed enabling ordinance, the city council lowered the company's rate schedule and thereby reduced anticipated profits from 8 percent to 4 percent. Colonel Waring informed the municipal authorities on April 5 that the company could not accept such terms. “This enterprise is undertaken by the gentlemen associated with me,” he said, “not as a philanthropic measure, but as a business enterprise. We must have a scheme with which we can go into the market and raise money; of course it must be one that will show on its face a reasonable profit.”\(^{30}\) Although the city council passed the amended ordinance on April 13, 1881, and Mayor Joseph A. Shakspeare signed it six days later, the project never got under way. In 1883 the ordinance was repealed, and the New Orleans Drainage and Sewerage Company's charter was revoked.\(^{31}\) Private sewers were constructed during the decade by the St. Charles Hotel, D.H. Holmes and Company, and Charity Hospital. But the sanitary association’s effort in behalf of a municipal sewer system financed by private initiative failed completely.

As the ASA turned from its defeats on the privy and sewerage issues, it met yet another obstacle in the problem of flood control.
During the winter of 1880–81 and on three other occasions during the decade, storms caused heavy overflows from Lake Ponchartrain into the city. So severe was the flooding in mid-February 1881 that it was compared with the great inundation of 1849. Less serious but still extensive flooding from heavy rainfall, forcing citizens to resort to pirogues and skiffs as the sole means of transportation, was a commonplace event. For the purpose of removing floodwaters, the city’s four antiquated, perennially broken-down drainage machines were almost totally inadequate. Shortly after its formation, the ASA assumed responsibility for repair and maintenance of the old pumps, but the machines invariably failed at a critical moment. So well drained was the city treasury, by contrast, that one newspaper concluded in 1885 that “the best drainage engineers have been at work for so many years in the wrong place, and their work precludes the exercise of large talents in other directions.”

Nevertheless, the ASA pressed forward in the early 1880s with its efforts to improve the existing surface drainage system. Between 1880 and 1884 the flushing committee spent more than $150,000 on pumps, fuel, and maintenance in its attempt to keep a constant volume of water moving through the street gutters. This project was the ASA’s most popular one with the public, but the committee’s experience was marked by continuous frustration. Flushing effectively washed the street gutters perpendicular to the river when the gutters were reasonably clean. But a substantial flow of water frequently overloaded the decrepit canal drainage machines and resulted in flooding. Subsoil seepage and solid street wastes had to be regularly cleaned from the gutters at considerable expense, a task the city authorities were inclined to neglect despite repeated appeals from the ASA and the board of health. During the summer of 1885, when the ASA’s resources were nearly depleted, the municipal Department of Public Works assigned the street force—prisoners from city jails and the parish prison—to cleaning the gutters. The work was so poorly done, however, that flushing water flooded a number of city streets. In 1886 the committee managed to pay expenses of $6,292 for flushing operations. But an ASA appeal to the city government the following year for ten thousand dollars to support the project was unsuccessful.

If the association’s flushing committee met with modest success at best, the same could not be said for its committee on canals. Originally dug to a depth of ten feet, the drainage canals were filled with from four to eight feet of muck, which even a substantial flow of water from the gutters could not move. The committee’s efforts were
frustrated by flooding from the fall of 1880 to the spring of 1881. But during the following summer ASA employees used a mud-scouring machine designed by a local engineer to reduce the solid content of three major canals by approximately two feet. In one of the municipal government’s few significant gestures of cooperation, during the winter of 1882 the city furnished one hundred laborers daily, and the ASA supplied planks, nails, and other materials to revet the sides of those canals. An official ASA report released in August 1882 declared the year’s work highly satisfactory. An editorial in the French-language newspaper in mid-January 1883, entitled “Le Curage des canaux de la Nouvelle-Orléans,” however, described the condition of the canals as extremely bad. The work on them had been poorly planned and executed, the writer charged, and at many points their liquid depth was no more than two feet. In his annual address the following month, ASA vice president Edward Fenner said as little as possible about the canals. Subsequently, the ASA’s efforts to improve the city’s surface drainage system grew increasingly feeble, and finally they collapsed. The Daily Picayune expressed its exasperated, harsh judgment in 1885 that “the efforts at drainage have been simply so many steps in a line of idiocy. Patchwork, and bad work, and meaningless work, have succeeded each other.”

In many ways the ASA’s inability to cope with the drainage problem precluded success in its endeavor to carry out the medical society’s recommendations concerning street cleaning and garbage disposal. Owing to saturation of the subsoil and regular flooding, only the highest and driest portion of the city—the business district near the levee—could support durable paving. To improve sanitation in this area, the ASA purchased two of the “best improved” mechanical street sweepers from a Concord, New Jersey, firm and presented them to the city in 1879. At this time, however, approximately 472 of New Orleans’s 566 miles of streets were unpaved, a situation that was virtually unchanged a decade later. Throughout the 1880s the condition of the streets, including those periodically resurfaced with gravel and other materials, was a familiar topic of newspaper editorial lament and the basis for charges of neglect and corruption against the city government. Not only did the city council have a notoriously unsavory relationship with one particular paving contractor, but the Department of Public Works, which had responsibility for street maintenance and garbage collection, was the agency of government in which patronage and corruption were most strongly entrenched. In theory, private contractors removed garbage from household and business premises, and the chain gang, composed of
prisoners from the jails and parish prison, picked up wastes and debris from the streets. Presumably, city nuisance boats then dumped all refuse in the downriver current of the Mississippi. In practice, the great bulk of the city’s garbage and refuse was removed periodically when receding floodwaters deposited it in stinking accumulations along the shore of Lake Ponchartrain. These were the conditions the ASA confronted when it undertook to improve street cleaning and garbage disposal.

Shortly following the ASA’s formation, its garbage boat committee, headed by the Reverend Hugh Miller Thompson, presented city authorities with two new garbage scows, costing three thousand dollars, for use at the municipal nuisance wharves. In order to improve street cleaning, the sanitarians also gave the city eighteen new covered garbage carts costing $2,200 and provided ninety-seven tarpaulins for its other carts. Initially, the ASA even furnished crews to man the new carts and boats. In return the city was expected to provide good service, maintain the equipment, post reliable watchmen at the wharves, and ensure that all garbage and refuse was properly towed downstream and dumped. These expectations, however, were to be disappointed. The municipal ordinances governing disposal of garbage and debris were adequate enough, but due to their lax enforcement, residents continued to discard waste in nearby courtyards, streets, and gutters. At the same time city newspapers daily reported citizens’ complaints that neither the contractors’ wagons nor the municipal street carts had passed through their neighborhoods for weeks or sometimes months. ASA inspectors seldom found watchmen on duty at the nuisance wharves, but they frequently observed ragged children picking through the garbage heaps in violation of a city ordinance. By 1884 the sanitarians also found the two street sweepers irreparably broken and rusted, the tarpaulins gone from the carts, and two of the city’s three garbage boats, along with the wharves, dilapidated and sunken. Colonel William Preston Johnston, ASA member and president of the newly endowed Tulane University, told a public gathering the following year that the universal need to act upon Herbert Spencer’s principle concerning the relation of knowledge to self-preservation was well “illustrated here in New Orleans, where we do not clean our streets and back yards, though Azrael, the angel of death, is on the wing, holding aloft the vial of pestilence with broken seal and filled to the brim.”

During the early months of 1884, with garbage piled in overflowing barrels, in the streets and gutters, and on neutral grounds and with the opening of the World’s Industrial and Cotton Centennial Ex-
position near at hand, a heated controversy erupted between the ASA and one of its members, Mayor William J. Behan. Contending that an emergency existed, the ASA offered to take over completely city garbage collection and disposal operations. When the Behan administration refused this offer, ASA officials urged the mayor at least to institute reforms in the procedures for awarding municipal garbage contracts. After Behan again declined to act, two hundred businessmen representing the city’s major commercial exchanges and institutions marched on city hall the evening of March 18 to present a petition demanding action. The merchant’s protest moved the authorities to take halfhearted action, but soon the garbage situation lapsed back into its usual condition. The ASA garbage boat committee briefly considered a franchise for three garbage cremation furnaces in 1885, but this required a minimum outlay of sixty thousand dollars, which, by that time, was beyond the association’s means.43

The medical society’s third major recommendation in 1879 was that New Orleans be provided with “a copious supply of pure water.” At that time and throughout the remainder of the nineteenth century, the city’s principal source of domestic water supply was the cypress cistern described by Mark Twain as a “mighty cask” to be seen “propped against the housecorner on stilts.”44 Although it was a quaintly distinctive feature of the New Orleans scene, a local physician reported in 1879 that the average cistern’s “contents are often so unclean as not to require microscopical examination for the detection of living organisms.”45 A year later the ASA sponsored a thorough study of household cisterns throughout the city. The analyst’s report compared cistern water with bilge water in ships and noted that the vent pipes of adjacent privies often extended directly above the cisterns. Also, dust from privy-polluted soil was wafted into the air, and rains washed it from overhanging trees and roofs into the large receptacles. The report recommended the installation of a cutoff device that would divert these early rainfall washings from the cistern, and in succeeding years the ASA’s sanitary director urged citizens to obtain the device in the interest of personal and public health. In 1887, however, board of health inspectors found only a few cisterns that had cutoffs, and the majority of these were installed improperly.46

Another hazard of cistern water supply was its total dependence on rainfall. Despite a bountiful average annual rainfall of sixty inches, citizens of all classes experienced hardship during times of drought. As one newspaper put it, “the large cistern holds more water than the smaller one, when it is full. When both are empty there is no
difference." However, the newspaper failed to acknowledge that in most tenements numerous families relied on a single cistern and that some tenements had no water supply whatever. In an effort to prevent the increase of sickness and death during drouths in the city's crowded districts, the ASA sponsored a "wet" ordinance that the city council adopted on February 13, 1883. The ordinance required landlords either to provide two hundred gallons of cistern capacity for each "habitable" tenement room or to furnish hydrant service by the New Orleans Water Works Company. Yet due to the law's vague wording, landlords easily evaded its provisions, and during the extremely severe drouth that fall there was great suffering in the tenements. At the ASA's request the city authorities agreed to open certain fire hydrants for public use, but the New Orleans Water Works Company secured an injunction preventing their action. The company's president, Albert Baldwin, who was an officer of the ASA, explained, "While there is no law to compel people to purchase water from the company, there is none to compel the company to pump water at great cost and furnish it to the people free."

Baldwin typified the executive whose personal civic philanthropies were one thing and responsibilities to corporate stockholders another. Along with the company's purchase of the waterworks from the city in 1878, it acquired an ironclad monopoly of providing a relatively small number of commercial and industrial subscribers with unfiltered Mississippi River water at high rates. Fortunately there were but few residential subscribers, for the ASA's water analyst noted in 1880 that the privy cleaners' dumping boats were moored near the waterworks's intake pipe. At any rate, under Baldwin's forceful leadership after 1878 the company greatly increased its income without any corresponding improvement in services. During the summer of 1882 the *Daily Picayune* stated that "our present water works system is of little use, except to furnish the means for cleaning yards and sprinkling the streets. . . . A system that would put into our houses pure, clear and sweet water in abundance and dispense with the cisterns would be a blessing."  

The waterworks monopoly concerned the ASA both as a sanitary matter and as a threat to the business interests its members represented. In 1882 the newly organized St. Tammany Waterworks Company applied to the city council for a franchise to supply the city with clear, safe water pumped from the nearby Boguefalaya River. The application was strongly endorsed by a conference committee of the ASA and the state board of health. But the New Orleans Water Works Company's monopoly was legally airtight, and the venture failed to
The New Orleans Sanitary Association

materialize. The following year Baldwin announced a program of “equalization,” which resulted in enormous rate increases to commercial subscribers.

Beginning in 1883 with local rice millers, whose rates in some instances were increased from 200 to 400 percent, the waterworks was constantly involved in suits with firms whose heads were members of the ASA. A few industrial users sought to break the company’s hold by successfully drilling deep artesian wells. While clear and chemically satisfactory for industrial purposes, however, the artesian water was considered neither wholesome nor palatable to the taste. In 1888, therefore, the waterworks company still collected handsome profits from the city and private subscribers, but it did so in the face of increasingly hostile public opinion.50

While most of the ASA’s energies and resources were devoted to municipal sanitary projects, the organization also sought to promote public health education and to assist the impecunious state board of health. Under the supervision of the association’s first sanitary director, Dr. Charles B. White, who was honored by being elected president of the American Public Health Association in 1880, numerous pamphlets on hygiene were printed in English, French, and German and distributed with the instructions: “Read carefully, consider well, and hand this to your neighbor.”51 Following his death in 1882, Dr. White was succeeded by Dr. William H. Watkins, an energetic sanitaryian, who served until his appointment as chief sanitary inspector of the board of health in 1886. Watkins continued his predecessor’s educational activities, and in 1884 he assisted other ASA members, including Dr. Stanford E. Chaillé, William O. Rogers, Isidore Newman, and Colonel William Preston Johnston, in organizing the New Orleans Educational Society. That year the Orleans Parish School Board adopted a resolution sponsored jointly by the society and the ASA requiring all teachers appointed after October 1, 1884, to pass an examination in physiology and hygiene. Dr. Chaillé offered a course of lectures in these subjects for teachers in the medical department of the new Tulane University, and he also wrote and lobbied in behalf of state legislation requiring health instruction in the public schools. In addition, the ASA’s sanitary directors cooperated with the board of health in improving school sanitation and in securing the enactment of municipal ordinances regulating the attendance of children exposed to communicable diseases.52

Among many examples of the ASA’s support of and cooperation with the board of health, perhaps the most spectacular and successful involved the control of smallpox. The disease had been on the
increase in New Orleans since the war, and between 1871 and 1877 there were 6,342 cases and 2,803 deaths, the overwhelming majority of the victims being blacks. Following a four-year decline, the pestilence resumed its deadly work, claiming 1,266 lives in 1883. Dr. Joseph Jones, president of the Louisiana State Board of Health from 1880 to 1884, had long been a strong advocate of compulsory vaccination, a view that was shared by the ASA's sanitary director, Dr. White. Careful examination of the revised city charter of 1882 by the ASA's attorney and other members who were lawyers convinced the sanitarians that a compulsory vaccination ordinance was fully within the power of the city council. Consequently, during the spring and summer of 1883, the ASA together with the board of health tried to secure the enactment of such an ordinance. Two well-known local physicians, Drs. Moritz Schuppert and William H. Holcombe, however, organized a group of citizens to oppose the measure, and it was defeated. On September 6 the ASA called for a joint conference with the city council and the board of health to determine what could be done under existing law to check the rapidly spreading disease.\(^{53}\)

In this instance, like many others, the ASA found the municipal authorities and the board of health unable to cope with the problem due to lack of funds. At a meeting on October 11, Dr. Watkins presented a detailed plan for fighting the epidemic, which the ASA members approved along with an appropriation for its implementation. Under the Watkins plan, the association established fifteen vaccination stations at convenient points throughout the city where immunization could be obtained free. Physicians who would perform vaccinations free of charge were provided with vaccine matter. The association also employed fifteen physicians and ten sanitary inspectors to visit house-to-house to urge vaccination on the unprotected, count both the vaccinated and the unvaccinated, and distribute disinfectants.

Meanwhile, ASA president Edward Fenner, Dr. Chaille, and other members worked with black ministers and teachers in an effort to persuade wary blacks to submit to vaccination. Dr. Chaille also wrote an article on smallpox and the benefits of vaccination, which was printed in pamphlet form and distributed throughout the city. By mid-January 1884 ASA physicians had examined 133,119 persons and vaccinated 5,847. The free vaccination service was continued for the rest of the year and throughout 1885 as well. During this time the ASA successfully sponsored a city ordinance requiring each child attending public schools to furnish a certificate of vaccination. As a result of the sanitarians' smallpox campaign, there were only 292 smallpox deaths in New Orleans in 1884; in 1885 there was but one.\(^{54}\)
In many ways, the year 1884 was a turning point for the sanitary association. For one thing, it was the low point of a national economic recession. For another, it marked the opening of the New Orleans World's Industrial and Cotton Centennial Exposition, one of those New South extravaganzas described by Woodward as "solemn circuses" during which southerners and their Yankee guests gathered "to invoke the spirit of Progress and worship the machine." In addition to hard times and the exposition, the Daily Picayune noted that "the year of our Lord 1884 is likely to become memorable for the mortality that has existed among the mercantile classes of this city." Commenting on the impact of these developments, ASA president Edward Fenner stated with regret that "death and removal from the city have deprived us of several active members, whom, strive as we may, we can never replace." Many years later a partisan observer, Dr. Joseph Jones, claimed that the ASA experienced "utter loss of influence" after 1885. While Jones's comment was somewhat exaggerated, the ASA's sanitary director, Dr. Watkins, stated in his report for 1885 that since no appropriation was made for his department that year, only one sanitary officer had been employed. Watkins resigned the following year, and in the spring of 1887 the New Orleans Medical and Surgical Journal announced that "the Auxiliary Sanitary Association is without money."

The year 1884 was significant in yet another way for the ASA, since it marked the end of Dr. Joseph Jones's stormy four-year presidency of the Louisiana State Board of Health. Jones, a prolific medical scholar, a professor of chemistry and clinical medicine in the medical department of the University of Louisiana, and a member of the board of health, was elected board president in the spring of 1880. Immediately, there was conflict between the former Confederate medical officer and the newly established National Board of Health, for which historians have criticized Jones even though many of his actions were provoked. Nevertheless, Jones and his associates subsequently charged the national board and its minions, including the American Public Health Association, the Sanitary Council of the Mississippi Valley, and the New Orleans Auxiliary Sanitary Association, with having "engaged in a systematic effort to undermine and destroy the influence of the Board of Health of the State of Louisiana."

At first cordial, relations between the ASA and the board of health became tense when the former demanded control over the sanitary officers whose salaries it paid, a demand that Dr. Jones, on advice from the state's attorney general, declined to honor. In 1882 Dr. Gustave Devron, a physician member of the city council who served as its liaison with the ASA, was elected president of the Sanitary
Council of the Mississippi Valley. When Jones and other members of the board boycotted the council’s meeting at Jackson, Mississippi, in 1883, the ASA construed their act to be one of overt hostility toward representatives of New Orleans’s interior trade area and themselves as well. As a result, relations between the sanitarians and the board of health became strained to the breaking point.61

Following Jones’s retirement in 1884, however, reorganization of the board of health resulted in the election of Dr. Joseph Holt as its new president.62 A native New Orleanian and former board sanitary inspector who had worked closely with the ASA, Holt promptly undertook to restore harmonious relations between his agency and other public health organizations. In his inaugural address on April 24, 1884, the new president said: “We recognize in the Auxiliary Sanitary Association of this city an organized system of help in the great work of municipal sanitation. If we can but keep in mind the higher interest of the community as the rule of our guidance, this association must be to us a right arm, an engine of power.” Holt also invited the Sanitary Council of the Mississippi Valley to hold its annual meeting for 1885 in New Orleans. In the course of his welcoming remarks Louisiana’s new chief health officer told the council members that “identity of purpose, unity of spirit, together with the relationship of States, have made us kith and kin.”63

Meanwhile, under Holt’s direction, the Louisiana State Board of Health assumed a role of leadership in both regional and local sanitary affairs. Despite vindication in the courts, the Jones board’s quarantine policies were regarded with a mixture of suspicion and fear by other communities in the New Orleans trade area, a situation that became more acute with the diminished role of the National Board of Health after 1883.64 Following his election as president of the board, Holt announced the implementation of quarantine in its literal meaning: forty days detention of incoming ships from foreign ports. Since the majority of its members were involved in interior trade, the ASA heartily endorsed Holt’s policy, but the New Orleans merchants whose livelihoods depended on foreign commerce were stunned.65 At a mass meeting of the city’s businessmen on June 20, 1884, the president of the board of health likened the state’s outmoded and dilapidated quarantine facilities and procedures to a wooden hoe. Forty-day detention was a medieval practice, he said, but it was a penalty for backwardness that would have to be endured indefinitely unless the existing quarantine system was completely overhauled. The changes Holt envisioned—a new inspection station on Pass-a-L’Outre in the eastern Mississippi River delta and mechanized
equipment for the disinfection of vessels—would result in a mini­
mum of delay for shipping with a clean bill of health. But this new
"hoe" would cost money, he added, and "until that is supplied, no
one has a right to complain if the crop is in the grass."66

The merchants responded favorably and quickly to Holt’s skillful
use of conciliation and coercion. With their support, he appealed suc­
cessfully on June 26, 1884, to the state legislature for an appropriation
of thirty thousand dollars with which to reorganize the quarantine
service. The installments of fifteen thousand dollars in 1885 and a like
amount the following year, however, were to be paid in state war­
rants, a heavily discounted scrip. When Holt announced in the
spring of 1885 that the installment was worth only six thousand dol­
ars, which meant postponement of both the renovations and a
change in quarantine policy, the merchants cashed the warrants at
face value. By mid-June 1885 the new quarantine facilities were in op­
eration, and on July 2 the board of health entertained the health of­
cers of Tennessee and the Gulf states with an inspection tour of the
new Pass-a-L’Outre station, followed by a repast of Louisiana cuisine
and French wine. The event marked a turning point in the state
board’s relations with other health authorities in New Orleans’s trade
area. It also brought Dr. Joseph Holt international recognition as an
expert in maritime sanitation.67

With the ASA in decline, the president of the board of health also
assumed personal leadership of the sanitary movement in New Or­
leans. In an address to the New Orleans Medical and Surgical Asso­
ciation on the evening of October 31, 1885, Holt told the doctors that
the most rigorous quarantine imaginable could not protect the city,
lacking as it did proper sewerage and drainage, from the certain di­
saster that awaited it. "NEW ORLEANS, TO BE SAVED," he said, repeating
the sentence for emphasis, "MUST BE DRAINED AND CLEANED!" The city’s
long history of millions spent on drainage to no avail called for a new
departure. Here, Holt believed, there were two essentials: first, a
fixed plan to serve as the basis for all future work, and second, “a
supervising authority,” which he conceived of as a board of public
works, “free from all political influence and entanglement.”68

The medical society responded enthusiastically to the address,
and following its conclusion the members adopted a resolution form­
ing a committee with Holt as chairman. The committee was in­
stucted to confer with like committees representing the board of
health, the ASA, the various commercial exchanges, and other inter­
ested groups. Together they would petition the state legislature to es­
tablish an independent municipal board of public works which
would receive tax revenue to accomplish Dr. Holt’s proposal for the drainage and sewerage of New Orleans.69

On February 5, 1886, pursuant to a call from the medical society, delegates from the several committees met in the offices of the ASA to plan a course of action. ASA president Edward Fenner stated the purpose of the meeting and summarized the association’s experience since 1879: “For the past seven years the active members of the Sanitary Association have closely observed the working of the present system; and it is their deliberate opinion that the peculiar needs of this city demand a change. However competent the chief officers of the department of public works may prove, their liability to be supplanted at every election, and the unavoidable obligations they incur to reward the influence and active service of partisans, has worked and will continue to do so, a positive injury to the great mass of the people both rich and poor.” In concluding his remarks Fenner emphasized the political and legal problems involved and suggested that a subcommittee be appointed to formulate a plan and report later. A subcommittee was appointed under the chairmanship of J.O. Nixon, attorney for the ASA, and on March 1 the delegates received and approved its plan.70

To carry out drainage, sewerage, and other major public works, the plan called for the establishment of a corporation consisting of fifty residents of New Orleans who were registered voters and taxpayers. The corporation’s affairs were to be administered by a board of directors elected by the members. No individual who had held political office compensated by fee or salary was eligible for membership. Candidates for such office during the preceding two years and those who became candidates in the future were similarly ineligible. Furthermore, no member could have an interest in any contract with the corporation.

To provide the corporation with revenue for its work, the plan required an act of the state legislature authorizing a city two-and-one-half-mill annual tax on property for a period of forty years. Anticipating approval of the special tax, the plan also included further legislation by the state granting the corporation authority to receive tax revenues and disburse funds, investing it with power of expropriation, and amending the city charter to delineate municipal and corporation jurisdictions. On April 19, 1886, the plan’s first phase was implemented when the delegates obtained a charter for a corporation named the New Orleans Draining and Paving Association. The overwhelming majority of its members and first board of directors were members of the ASA, and its first president was Edward
Fenner. Though the ASA did not disband, for all practical purposes it was supplanted by the Draining and Paving Association.

The scheme was a bold one. Attributing the meager results of seven years' labors to political obstacles and the inadequacy of voluntary contributions, the sanitarians abandoned their auxiliary role and sought anew to achieve their basic aims through a private corporation supported by public funds. The move proved to be as unsuccessful as it was audacious, however. There was immediate and bitter opposition from the administration of incumbent mayor J. Valsin Guillot and the powerful Tax Payers' Association. Despite the intensive efforts of Dr. Joseph Holt and Edward Fenner between 1886 and 1888, the corporation was unable to obtain a legislative enactment permitting the tax referendum to be held. Pressure was brought to bear on the president of the board of health, and in 1888, under extreme duress, Dr. Holt resigned, and he and his family moved to Portland, Oregon.

Nevertheless, as a result of the municipal elections that year, Joseph A. Shakspeare, a former mayor, an ASA member, and a member of the board of health from 1884 to 1888, was returned to the mayor's office. Following his inauguration, Shakspeare secured passage of an ordinance creating a municipal Drainage and Paving Commission to be composed of the mayor, the commissioner of public works, and seven prominent businessmen representing each of the city's districts. To fund the commission's work, he also obtained legislative permission to hold a municipal referendum on a proposed three-mill property tax to be levied annually for ten years. The referendum was held on May 28, 1889, and despite the support of the Draining and Paving Association and the city's newspapers, the special tax was defeated by a vote of 2,884 to 1,968.

Following the disastrous yellow fever epidemic in 1878, the leading business and professional men of New Orleans undertook to restore and enhance the city's viability as a center of economic activity. The principal vehicle for this effort was the New Orleans Auxiliary Sanitary Association, a group known locally as the "faithful two hundred," whose members embraced the doctrines of the sanitary movement and an assortment of Yankee values with the fervor of religious faith. Working closely with the New Orleans Medical and Surgical Association, the ASA labored to prevent the recurrence of yellow fever while presenting a new cleansed and sanitary image of the city to both region and nation. In addressing the formidable physical and financial dimensions of their self-appointed task, the
sanitarians were restricted by their auxiliary relation to the municipal government and the state board of health.

Never generously provided for, the board was particularly strapped during the early 1880s when its authority to collect quarantine fees, a major source of its income, was suspended by court injunction. According to the French-language newspaper, *L'Abeille de la Nouvelle-Orléans*, the city government’s standard reply to any proposal requiring money was *pas d'argent*. The city’s financial impoverishment, however, was due less to corrupt practices, although there were plenty of those, than to the stringency resulting from its effort to fund an enormous debt. Thus, in attempting to assume the functions of a municipal department of public works and those of a board of health, the ASA was frustrated by financial limitations and the lack of statutory authority, not to speak of the obstacles to change presented by the community’s long and devoted commitment to the pleasure principle.

If the significance of the ASA is measured by its success in carrying into effect the basic sanitary recommendations made by the New Orleans Medical and Surgical Association in 1879, then obviously its achievements were limited. Of vastly greater importance, however, the sanitarians did change the city’s image, at home and abroad, an image to which Dr. Joseph Holt and the Louisiana State Board of Health added further positive enhancement between 1884 and 1888. Edward Fenner, the carriage and saddlery dealer who served as president of the ASA and its successor, the Draining and Paving Association, invoked the spirit of progress in an 1886 address to fellow New Orleans sanitarians, who had worked toward a healthier city for nearly a decade: “Now, New Orleans is indisputably in a transition state. Lacking the ability to prevent changes which are inevitable, it becomes our duty to employ all legitimate means to mould these universal changes in the course of trade to our advantage.” As the voluntary forerunners of later political and social reform groups, the New Orleans sanitarians of the 1880s were the vanguard of the public health movement in the New South.
In early November 1878, as the first refugees returned and places of
business slowly stirred with activity, the Memphis *Daily Appeal* made
a public confession on behalf of the battered community: “We have
been a prey to every excess of human passion, folly, ignorance and
incapacity, and to-day, as a result, have to stand with our heads
bowed, confessing in an overwhelming debt, in a rotten pavement,
and in the want of a sanitary system that we are still wobbling in the
weakness of municipal adolescence.”¹ The negative attributes of hu­
man nature enumerated by the *Daily Appeal* were particularly appar­
et in the character and conduct of the city government since 1867. A
debt of almost five million dollars was the chief result of governmen­
tal fraud and mismanagement over the years, the most conspicuous
evidence of which was ten and three-quarter miles of street surfacing
known as Nicholson pavement. The pavement, consisting of cypress
blocks set in pitch, was contracted for in 1866 and completed two
years later. But the job was hardly finished before the pavement be­
gan to deteriorate, and in 1872 the city engineer estimated the cost of
necessary repairs at twenty thousand dollars.²

“The Nicholson,” as the paving was called by the newspapers
and in the conversation of residents, daily reminded the communi­
ty’s leading citizens of the bond fraud involved in the letting of the
contract, the legal battles with the contractor over payment ever
since, and Memphis’s deepening indebtedness after a political coaliti­
ion of blacks, Irish, and Italians captured city hall in 1874. Beginning
in 1868, conservative property owners and businessmen, with the
support of the chamber of commerce, made several unsuccessful
attempts to repeal the city charter and to either repudiate or com­
promise the continuously rising debt. The decisive blow, following
the cholera and yellow fever epidemics of 1873, accompanied by
the onset of depression, was the return of the fever in 1878 to a by­
then insolvent city. The resulting deaths of over four thousand whites
and the flight of nearly twenty thousand more, according to Charles
Clotfelter, raised the fearful specter of black rule and set the stage for what one student of the city's history has called the "political revolution of 1879."  

Between Thanksgiving and Christmas of 1878 events moved swiftly. As the floundering city council was being beset daily by creditors and writ servers, a small group of prominent lawyers and merchants came to the fore. Following their failure to reach compromises with the city's creditors, described by the press as bloodthirsty predators, a public meeting was called for New Year's Eve at the Greenlaw Opera House. There, to a gathering of two hundred of their fellow citizens, the leaders offered a resolution invoking the Declaration of Independence: "That whenever government, from any cause, becomes unable to provide for the peace, safety and general welfare of its inhabitants, it should be abolished and another instituted in its place." The assembly overwhelmingly endorsed the resolution, and two weeks later the city's board of aldermen voted six to three to abolish the municipal charter.

Within a matter of days a charter abrogation bill was before the state legislature. Originating in the senate, the bill passed that body easily on January 25 by a vote of twenty to three. But there was political drama in the house on its third and final reading four days later. An amendment seeking to prevent impairment of the city's obligations to existing contracts was tabled thirty-six to twenty-three, and the bill passed on final reading fifty-three to ten. On January 31, 1879, Governor Albert S. Marks signed an act abolishing the charters of corporations of thirty-five thousand or greater population (proclaiming Memphis the only municipality affected) and then signed a second act establishing the Taxing District of Shelby County, a commission form of municipal government that antedated Galveston's experiment by more than twenty years. To head the new government as president of the Taxing District, the governor appointed David T. Porter of Porter, Taylor and Company, factors and commission merchants, who was also president of the Planters' Insurance Company. The next day a local paper called attention to the fact that Governor Marks had "not designated even one professional politician for Commissioner of the nation's only Taxing District."

Among the new government's initial acts in February 1879 was the appointment of the city's first permanent board of health. Its salaried medical officers were Dr. Gustavus Brown Thornton, superintendent of the city hospital, and Dr. John Abercrombie, a well-known local physician, named president and secretary respectively. The board also included police captain D.F. Jackson, health officer, police chief
Philip Athey; and Taxing District president Porter, who served ex officio. In early April Dr. James D. Plunket, president of the recently strengthened Tennessee State Board of Health, issued a call inviting representatives of state and local boards of health throughout the Mississippi Valley to a conference in Memphis to be held April 30–May 1, 1879. The result of that meeting, hosted by the new Memphis board, was the formation of the Sanitary Council of the Mississippi Valley.

One of the principal speakers at the two-day meeting was General Cyrus Bussey, president of the recently formed Auxiliary Sanitary Association of New Orleans, who told of his organization’s aims and early accomplishments. Three weeks later a joint meeting of the chamber of commerce and the cotton exchange, attended also by other interested citizens, was held at the Memphis Theater on the afternoon of May 22, resulting in the formation of the Auxiliary Sanitary Association of Memphis. The group immediately went to work assisting the board of health with street cleaning and garbage collection. These efforts were made by the initiatives of individual members and through contracts let by the organization. The ASA also contributed almost three thousand dollars in 1879 toward the city’s purchase of mules, carts, and equipment for sanitary work. In a community fearful of the coming summer season, the sanitarians’ good works gave a boost to municipal morale.

“Although the last case of yellow fever in Memphis occurred early in December, 1878,” noted the Daily Avalanche on June 1, 1879, “hardly a fortnight has passed since without crack-brained persons starting a report of newly discovered cases.” In fact, a number of well-informed, responsible individuals believed that the fever survived the winter. Dr. W.L. Coleman, a representative of the National Board of Health, later reported his knowledge of a yellow fever death in Memphis on May 26. The case, he said, had been marked by black vomit and suppression of urine. Coleman also reported that some “doubtful” cases had occurred in late June. But the first death attributed to yellow fever by local health authorities in 1879 was that of Frank Mulbrandon on July 9. Although Mulbrandon, a shoemaker, lived on DeSoto Street in the sixth ward, new cases soon appeared in the eighth and tenth wards. On a torrid July 10, for the second time within a year, citizens were addled with heat and fear, and every path of egress from iron rails to dirt roads became choked with terrified humanity. By the following day quarantine had been declared against Memphis from New Orleans to Cairo and from Galveston to Norfolk.
In contrast with the helplessness and confusion that had marked official reaction in 1878, however, the response in 1879 was calm and swift. Former mayor John Johnson and Dr. Robert W. Mitchell, resident members of the Tennessee State Board of Health and National Board of Health respectively, immediately notified their superiors. In an emergency meeting on July 11 the state board adopted quarantine regulations, appointed seven Memphis physicians as railroad inspectors, and named Johnson superintendent of quarantine. Needing supplementary funds for these activities, the board turned to Governor Marks, who agreed to make an "extraordinary" allocation, but not "unless such necessity should plainly appear." An appeal was then made to the National Board of Health, and on August 16 its vice president, Dr. John Shaw Billings, met with state and local officials at McKenzie, Tennessee, a small town about one hundred miles northeast of Memphis, to confer on the situation. The result of what came to be known as the McKenzie Conference was a division of labor whereby disinfecting and quarantine work were assigned to the state board, and Memphis authorities were to maintain garbage collection and street cleaning. The national board would act in an advisory capacity and pay the bills.

Two days later, on August 18, the state board's quarantine rules and regulations "for the Government of Memphis and Other Infected Districts in Tennessee" were implemented together with systematic railroad inspection. Shortly, Superintendent Johnson commenced a program of disinfection and interior quarantine within the city. A central clearinghouse was set up utilizing a system of health certificates, through which persons entering or leaving town had to pass. The Daily Avalanche reported on August 28 that "Memphis was never more orderly than at present." As the case and death tolls mounted, however, control of the city was tightened even further, and by September 1, John Johnson held what amounted to absolute authority.

Meanwhile, rapid depopulation of the city following the initial panic, plus the likelihood that many of those who remained had survived an infection the previous year, prevented recurrence of the horrors of 1878. Seven refugee camps were set up outside the city, and by July 20 the newspapers were urging all remaining citizens to enter them. Black residents, confident of their safety from the disease but fearful of the security of their possessions, stubbornly resisted entreaties to evacuate, and efforts to coax them out to Camp Douglass with promises of generous rations were fruitless. An official census taken on July 28 revealed that of the 16,110 persons remaining in
"Examining the credentials of passengers bound to and from Memphis by railroad." Frank Leslie's Illustrated Newspaper, 20 September 1879.

the city—11,287 of whom were black—9,743 claimed to have had yellow fever.¹⁹

Following the initial panic of July 10–11, the Daily Appeal boldly assured the public on July 13 that "an epidemic is out of the question." On July 22, after two weeks of hesitation, President A.D. Langstaff of the Howard Association appointed two of the organization's twenty members to ascertain the number of sick and their necessities so that relief work might be begun. As the month of July ended, the Howards began their noble labors, employing a small nurse corps and four physicians to minister to the sick and dying.²⁰ During August the Howards spent the slightly more than $21,000 carried over from 1878 on medical care and other necessaries for 2,103 sufferers. Only $3,920.40 in current contributions had been received by September 2, and two days later the association was over $4,000 in debt with expenses running $1,000 per day. With great reluctance, the Howards decided to appeal to the nation for help once again.²¹

During the previous year's epidemic the local newspapers had served the stricken city as channels of contributions from across the
nation and throughout the world. But in 1879, at least initially, the newspapers actively hindered local relief efforts. Memphis, lamented the *Daily Avalanche* on September 2, already cursed with doctors, boards of health, and Howard's, was to be exhibited before the world as a colony of alms-seeking pariahs. "Beggars all. Shall we be beggars all? God forbid." Three days later the same paper admitted that "the stern realities of the situation demand that the appeal be now made," but apparently the damage was already done. After mid-September, the Howards barred the press from their meetings, and President Langstaff was compelled to take to the road in search of aid. Jay Gould and the New York Chamber of Commerce were again major contributors during the fall of 1879, giving 40 percent of the $50,103.22 raised. Yet in the end, the Howards were just barely able to meet their expenses.  

The relief society's conflict with the press and the papers' increasingly strident tone during September (especially the *Daily Avalanche*) reflected a growing tension between community business leaders and the health authorities, particularly Superintendent Johnson and the state board. With the work of disinfection and train and steamboat inspection proceeding smoothly, in early September, with the approval of the National Board of Health, Johnson acted to prevent surreptitious movement in and out of the city by the establishment of an encircling picket guard. Among the "Instructions to Pickets and Patrols" issued to the armed and mounted guards was what was shortly to become the infamous Rule no. 6: "Neither lint cotton nor seed cotton," it provided, "will be allowed to enter Memphis during the epidemic."  

The same warm September weather that kept *Aedes aegypti* active, however, was also opening cotton bolls that needed to be picked and ginned. Planters and cotton factors petitioned the president of the state board of health, Dr. Plunket, for relaxation of Rule no. 6, and a protest meeting, led by former mayor John Loague, was held at the corner of Beale and Hernando streets on September 10. The following day the Shelby County Medical Society added its voice to the cries of outrage. Nevertheless, the unrelenting Plunket, described by the *Daily Appeal* as affecting "the magnificent pomposity of a Mexican Brigadier General," ordered Johnson to strictly enforce the rule until the epidemic ended.  

By mid-September Memphis bore the appearance of a town under siege. Church services and other public gatherings were prohibited. Howard visitors, doctors and nurses, police and firemen, and newspaper reporters were, with patrolling militia and citizens guarding
against thieves and arsonists, among the few to be seen on the streets. At the same time, sixty men and twelve mule teams were employed at disinfecting privies and houses where cases and deaths occurred, using two hundred barrels of lime and five thousand gallons of copperas solution per day. When a death occurred, the corpse was washed with zinc sulphate, wrapped in a sheet soaked in the same solution, and promptly buried. Still, the city was virtually sealed off from the outside world, with little or no movement of persons coming in or going out.27

On September 20 the Daily Avalanche let loose a furious and intemperate blast against the authorities: “Memphis has been literally destroyed by . . . the National and the State Board. If the remorseless tyranny of these two organizations is to be continued indefinitely, it will be a wise proceeding to burn the town.” As the epidemic ended, the Daily Appeal proclaimed on October 25 that “the history of Tennessee will have no darker pages that those which contain the records of the operations of the State board of health.” Still, Superintendent Johnson, who was likened to William the Conquerer, stood firm, and cotton stayed out. During October the picket force was strengthened, and until the first frost brought suspension of the cotton quarantine on October 20 and disbanding of the pickets four days later, Rule no. 6 was stringently enforced.28 Not only did Johnson and the state board make an impressive demonstration of public health authority, but the whole episode was also a civic learning experience for Memphians and the Taxing District government.29

The number of yellow fever cases and deaths had been declining rapidly before a heavy frost on October 24, and the Memphis epidemic of 1879 was declared ended the following day. During the next week the refugee camps disbanded, and soon the city’s streets were again crowded with returnees, drays, and other vehicles filled with incoming and outgoing cotton and merchandise. Altogether, between July and November, over two thousand persons, many of them black, were stricken with yellow fever, and of that number nearly six hundred died.30 Though milder than the devastating epidemic of the previous year and with virtually none of its accompanying horrors, the outbreak in 1879 had stalled the progress of sanitary work, to which national, state, and local authorities renewed their attention.

Previously, at the McKenzie Conference in August, there had been an offer of assistance by the National Board of Health in conducting a sanitary survey of Memphis, if such was formally requested by state and local health officials. The request was made, and on November 22 a committee of the national board headed by Billings
convened in the Bluff City. Two days later a house-to-house survey began under the direction of a national board sanitary officer, Dr. Frank W. Reilly. Although the survey was not completed until January 3, 1880, the committee was able to make a preliminary report on November 27. This gave Taxing District president Porter something to present to Governor Marks, for among the committee’s recommendations, the item of greatest expense was a sanitary sewer system for the city. On December 6 the governor ordered a special session of the Tennessee legislature to convene on December 16. A week later, just before Christmas Eve, legislation was enacted providing authority for a special sewerage levy within the Taxing District.\(^{31}\) By then the sanitary survey was nearly complete.

Beginning November 24 Reilly, seven physicians appointed as ward inspectors, and twenty-six subinspectors spent five weeks assessing the city’s sanitary condition. Though their work was impeded by torrential rainfalls, ward squads went out daily, equipped with measuring tapes and lanterns. Detailed reports of findings were recorded on specially prepared forms with indelible pencils, and returns were audited daily to ensure accuracy. When the survey was completed, it revealed a city census of 30,659 as of January 1, 1880.\(^{32}\) But even more revealing were facts and figures that laid bare some of the preventable causes of Memphis’s notorious death rate.

The survey showed that 7,384 families occupied 5,584 of the 6,386 dwellings counted, most of which were extremely dilapidated. “There are few of these,” wrote Reilly, “which do not require radical alterations in order to justify their retention for occupancy.” Of the total of 7,202 buildings in the city, 72 percent of them wooden, 1,515 had cellars or basements. Among these, 786 were found to be “badly ventilated, damp, or wet, many with water standing from 2 to 18 inches deep on the floors, and with walls soaked by sipage from the surrounding polluted soil.”

Inspection of 12,096 premises, including vacant lots and cemeteries, also revealed that 6,000 privies—fetid sinks varying from shallow pits to brick-lined vaults forty feet or more in depth—were in excessively foul condition. “The extent of soil pollution from this source,” noted Reilly, “may be the better inferred when it is understood that the above figures do not include a large (probably equal) number of disused, but unemptied, vaults, the contents of which were only imperfectly covered by a shallow layer of ashes or refuse.” There were but four and one-half miles of privately owned sewers in the city, having only 215 connections. An area of 5,000 acres, embracing 2,590
acres in the Taxing District, was still being drained almost exclusively by the polluted Bayou Gayoso.33

The survey found that the privately owned Memphis Water Company had gone bankrupt during the epidemic in 1879 and that even before its demise the company, which pumped from the nearby Wolf River, had few residential subscribers. Analysis of Wolf River water confirmed the suspicion that it was “unwholesome in a high degree.” Most of the city’s domestic water supply was drawn from 4,744 cisterns and wells, of which the sanitary inspectors found 3,408 to be within contaminating distance (fifty feet or less) of privies.34 “When it is considered,” Reilly concluded, “that a large proportion of such cisterns and wells are known to be defective, enough will have been said on these points to indicate some of the causes of the high death-rate of Memphis.”35

Evaluation of garbage and waste removal showed the Taxing District’s sanitary force—consisting of nine carts, thirteen mules, and sixteen men—to be seriously inadequate for servicing the city’s sixty-seven miles of streets and thirty-five miles of alleys, most of which were unpaved. It was claimed that the force made rounds of all thoroughfares once a week. Yet the inspectors found that only half the work reported was actually being done and that four of the city’s ten wards received practically no service at all. The chief inspector recommended rigid enforcement of the local garbage ordinance and suggested increasing the sanitary force during good weather until paving rendered streets passable the year around.

Finally, the National Board of Health’s sanitary survey report showed that 72 percent of Memphis’s average annual death rate of thirty-four per thousand of population was primarily attributable in ordinary years to respiratory, intestinal, and malarial diseases. Adequate sewerage and safe water, Dr. Reilly observed, should reduce the local mortality rate to twenty per thousand within five years. But, he concluded, “until the social and moral status of the colored population is materially improved, it will probably be too much to expect that the theoretical standard of 17 in the thousand can be attained.”36

On January 21, 1880, with legislative authority for funding recently obtained and with economy as the watchword, work began on what would become known internationally as the Memphis system of sewerage under the superintendence of its engineer-designer, Colonel George E. Waring, Jr.37 The basic unit of the Waring system was six-inch vitrified sewer pipe. House drains four inches in diameter entered the six-inch street unit at an acute angle. One of the
system's major weaknesses at the outset was the absence of restrictions on household plumbing, resulting in frequent stoppages in the unit lines. Each street or alley line, which was limited to three hundred connections, was served by a 112-gallon capacity flush tank. In theory, each tank, connected to the city waterworks, discharged automatically once every twenty-four hours and flushed the line. Eight, ten, and twelve-inch connectors received the flow of the unit lines, and the connectors, in turn, drained into two fifteen-inch main sewers, one on either side of Bayou Gayoso, the all-purpose creek and drainage ditch that meandered through the city.

The absence of manhole access to the relatively small lateral mains and connectors meant, however, that streets had to be torn up to remove obstructions. The two mains connected to a twenty-inch brick trunk that emptied into Wolf River. At the same time, subsoil drainage was accomplished by laying porous field tiles in the sewer trenches, and this drainage was diverted into Bayou Gayoso. Yet no provision was made for handling storm water, an aspect of the system that made it highly controversial in engineering circles. 38

For three years, until 1883, sewer construction proceeded under the supervision of Colonel Waring and his local associate, Major J.H. Humphrey. The work proceeded according to Waring's timetable, with 24.2 miles of pipe laid in the first year. Delegations of sanitarians came from Baltimore, Nashville, and New Orleans to inspect the system, which, by December 31, 1881, had a total of 7,799 connections. Equally impressive was the fact that maintenance costs for that year were only $884.49. 39 After 1883 sewer development was taken over by the Taxing District with City Engineer Niles Meriwether in charge. During the next three years construction was extended continuously, with completion of the Monroe Street intercepting line closing the history of Bayou Gayoso as the area's principal overflow receptacle and source of foul odors.

Yet for all the puff in the press about cleanliness, the system had significant deficiencies. No provision had been made for flushing the old private sewers purchased by the Taxing District. As of 1886 the city's ninth and tenth wards, containing neighborhoods of the poorest residents, were altogether unsewered, a condition reflected in comparative mortality rates. 40 Nevertheless, as of December 1, 1886, Memphis's drainage system consisted of 43.39 miles of sewers and 35.09 miles of subsoil drains, and in his annual report for that year City Engineer Meriwether stated that "the system of sewers appears to give entire satisfaction both to the city government and citizens generally." 41 At the conclusion of an inspection tour, the visiting chief
engineer of Mexico City, Roberto Gayol, expressed enthusiasm over what he had seen. Speaking before the meeting of the American Public Health Association that fall, Dr. G.B. Thornton, president of the Taxing District Board of Health, boasted of a $291,600 sewer system, every inch of which was paid for.

By 1890, although some work had been done in the ninth and tenth wards, the heavily populated area immediately east and west of Bayou Gayoso was still unsewered. Even so, Taxing District authorities claimed that the accomplishments of a decade's work were real and tangible. Aside from the sewer works, extensive paving and sodding had converted the old, smelly Bayou Gayoso from a lengthy cesspool into a useful conduit of storm water drainage. Most of the city's 6,000 privies enumerated in the national board's sanitary survey in 1879 had been filled in and replaced by 7,535 new water closets. On the one hand, the Waring system's inadequacies in 1890 were an undeniable reality. Yet on the other, wholesale and indiscriminate pollution of the soil had been stopped, and this was, perhaps, Memphis's most significant sanitary achievement of the 1880s.

The sanitary survey in 1879 had shown that, next to drainage, an adequate, safe water supply was the city's most pressing health need. This problem, as it turned out, was much more difficult of solution. Of the local sanitary reform issues of the decade, the water question was not only the object of greatest public concern, but it was also the most bitterly contested.

On June 17, 1880, the Taxing District's court-appointed receiver, Thomas J. Latham, a well-known Memphis land developer and general investor, purchased the bankrupt Memphis Water Company at the bargain price of $155,000. The company was reorganized with Latham as president, and the waterworks shortly resumed operation. Yet hopes that the company's former public-be-damned policies and the quality of its product would both be improved were short-lived. A measure of public satisfaction might have been given by filtration of what the newspapers called the "Wolf River conglomerate," but the company declined to assume the expense. Still more numerous and outraged complaints were made about low pressure and insufficient volume. Latham claimed, and the board of health's Dr. Thornton agreed, that much water was being wasted. In 1881, however, there were only 2,355 taps on the company's books for the entire city. Early problems with the Waring sewer system were due largely to inadequate water supply, for many citizens had to flush their new water closets by carrying buckets from cisterns and wells. "The great cry in Memphis at present," noted the Daily Appeal on November 28,
1880, "is for water—not for drinking purposes, but for mercantile and sanitary uses."

Between 1881 and 1885 businessmen fought the water monopoly, created in part by a contract with the city signed May 1, 1882, with suits and injunctions. The result, essentially a standoff, meant that citizens had a choice between using contaminated cisterns and wells, contrary to city ordinance, or the water company product from Wolf River, a stream contaminated by a soap factory, slaughterhouses, Bayou Gayoso drainage, and backwash from the Mississippi River sewer outlets—or doing without. Neither Latham’s attempt to sell the works to the city for $350,000 nor the city’s efforts to compel the company to pump from the Mississippi were successful. But the determination of local mercantile men and manufacturers was unaltering. “There was never a reform end proposed,” observed one newspaper, “that was not soon or late attained. The Wolf river water people should heed the lesson. Soon or late Memphis will have better water and it will not wait very long for it either.”

The clamor for good water and plenty reached a climax in the summer of 1885 and, along with it, strong sentiment favoring a municipally owned waterworks. On July 23 the Taxing District legislative council appointed a committee headed by a highly respected citizen, General Colton Greene, to study the water situation with public ownership in view. The committee’s report, submitted early in 1886, made essentially the same recommendation that an engineering study had proposed almost twenty years previously: that a municipal water supply be drawn from the Wolf River near the outlying village of Raleigh. General Greene estimated that a city-owned plant could be constructed for $952,000 and that anticipated revenues would exceed interest and maintenance expenses by $24,000 per year. The next move was up to the Memphis Water Company.

Judge Latham and his directors appear to have believed initially that the Greene committee’s appointment was a bluff. But public excoriation of the company during the water famine of the blistering summer of 1886 gave Latham second thoughts. His attempt to sell the waterworks to a group of New York investors fell through in November when the prospective buyers learned that, contract or not, Memphis officials had other plans. Taxing District president David Park Hadden had already turned to the state assembly for help, and on March 20, 1887, legislation was enacted and approved permitting the local government to issue $150,000 in new waterworks bonds.

An unexpected alternative solution to the city’s water problem, however, was already at hand. In 1883 Richard C. Graves, superin-
tendent of the local Bohlen-Huse Machine and Lake Ice Company, began experimental drilling of artesian wells. Early results were disappointing, the Daily Avalanche taking the view of city scoffers on June 17, 1883, that “it is nonsense to talk about artesian wells.” Yet by 1885, so intense was public hatred of the Memphis Water Company that news of successful artesian drilling at Aberdeen, Mississippi, and Selma, Alabama, created a surge of community interest and enthusiasm. Then in May 1887, following years of failure and frustration, the Bohlen-Huse Company’s experimental well on Court Street, at a depth of 354 feet, suddenly gushed forth clear, cool, good-tasting water. Eager residents flocked to the well with all manner of containers, and their jostling and flaring tempers necessitated the presence of police to preserve order. Shortly, chemical analysis confirmed that the water was as pure as it looked and tasted. 50

On July 30, 1887, the Taxing District entered a contract with the newly formed Artesian Water Company for a municipal water supply. The new corporation absorbed the old Memphis Water Company through a stock consolidation arrangement in February 1888, and the city’s contract with the latter was subsequently abrogated. 51 By September of that year connections were completed for supplying the city with ten million gallons per day flowing from thirty-two artesian wells. 52 In an expansive editorial on September 16 entitled “Farewell to Mud,” the Avalanche proudly proclaimed that “the long wished for result has been attained, and the people of Memphis have today the clearest, purest and best water of any city in the South.”

Following the recommendations of the National Board of Health’s sanitary survey, beginning in 1879 the rotted cypress Nicholson pavement was ripped up with a vengeance. Soon, soil desaturation resulting from sewerage and drainage work made possible better paving with materials described in municipal reports as rubble stone, Paducah and Tishomingo gravel, and Telford pavement. In December 1886 City Engineer Meriwether reported that 22.72 miles of Memphis streets had been surfaced and guttered at a cost of $700,893.44. 53 Increasing business demands required paving that could better withstand sustained use by heavy traffic, and toward the end of the decade granite became the paving material of choice for the commercial district. An item in the Appeal of April 21, 1889, noted that “stacked along Third street are thousands of granite blocks for paving purposes.” In portions of exclusive residential areas some fine, decorative paving was done with vitrified brick laid on a nine-inch concrete foundation. But even though it was claimed that the greater part of Memphis streets, some fifty miles, were paved by the early 1890s,
the reality was that the most durable paving, as well as sewer and sanitary services, were to be found mainly in the business district and in the more comfortable residential neighborhoods.\(^{54}\)

One of the more prominent figures in the local sanitary movement was John McLeod Keating, editor of the Memphis Daily Appeal, historian of Memphis, and chronicler of the disastrous yellow fever epidemic of 1878. "So necessary to life and health," he wrote in 1880, "the enforcement of sanitation should not be left to chance, or the soft and gentle entreaties of the dilettanti. Neither appeals from the pulpit, the rostrum, the pamphlet, nor by 'address,' should be allowed to usurp the place of law."\(^{55}\) The Taxing District authorities seem to have taken Keating's admonition to heart, for one of the more significant, and successful, aspects of the local cleanliness campaign was the place given to sanitary law and its enforcement.

Following the guidelines established by the National Board of Health, disuse and filling in of privy vaults, disuse of contaminated wells and cisterns, demolition and/or renovation of unsanitary structures, and general sanitary maintenance of premises were required by law. Recommendations of the board of health had the same force, and throughout the 1880s the board's sanitary officer, Captain D.F. Jackson, and his squad of inspectors issued citations and kept the recorder's court busy. Under their supervision, roving bovines and hogs, once a ubiquitous sight, disappeared from the streets; sidewalks were swept; and garbage was containered. By the early 1880s, if general cleanliness and order were not always the rule, neither were they the exception.\(^{56}\)

Yet of the sanitary program's major initiatives, perhaps garbage collection was the weakest. The more affluent neighborhoods, of course, received the best and most regular service. Still, considering its relatively low priority and fund allocation, the small street force made a fair showing in its efforts to keep pace with a rapidly growing population and the sniping of a sanitation-conscious press. An official report boasted in 1884 that "the garbage system of this city we think excels in efficiency any city that we know of, and our own people as well as those who visit us, express the belief that we are the cleanest city in the country."\(^{57}\) Nevertheless, by the late 1880s, Memphis's garbage service, like its drainage facilities, was inadequate to the needs of the growing community.

In the eyes of city business leaders, sanitary measures were but half of the work toward safety from pestilence. A vigilant quarantine was the other half, and local officials were outspoken about it. "Memphis can better afford to give up the commerce of the whole country
south of it for three or four months of the year, for an indefinite pe-
riod, than be again subjected to a visitation of yellow fever,” said Dr.
Thornton in a presentation before the American Public Health Asso-
ciation at its New Orleans meeting in 1880. Moreover, said Thornton
boldly, aware that members of the Louisiana State Board of Health
were in the audience, “that New Orleans is a standing menace to the
country along the Mississippi River for several hundred miles north
of her, for at least three months of the year, there is no doubt in
my mind.”58

Following the epidemic of 1878, the view came to be widely held in
the mid-South that the Louisiana State Board of Health could not be
trusted. When Dr. Joseph Jones refused to cooperate with either the
National Board of Health or the Sanitary Council of the Mississippi
Valley, the apprehensions of those who already looked toward New
Orleans with a suspicious eye only increased. It was no secret that
the Louisiana board was receptive to the blandishments of New Or-
leans merchants engaged in the Caribbean trade. On April 24, 1880,
the Daily Appeal warned that “day after day vessels arrive at her
levees and piers direct from infected South American, Mexican, and
Cuban ports, without, so far as appears on the surface, the slightest
let or hindrance from her quarantine or health authorities.” Strapped
to the limit financially by its sanitary program, Taxing District offi-
cials requested that the National Board of Health assume charge of
quarantine inspection at the station on President’s Island. Between
May 18 and October 1, 1880, Memphians took comfort in the federal
quarantine presence on its waterfront doorstep.59

Following the end of the quarantine season that year, the Memphis
Cotton Exchange adopted a resolution stating that the national
board’s service “merits the unqualified approbation of every mer-
chant, tax payer and citizen throughout the valley.”60 Desiring that
the service be continued, formal requests were again made by Taxing
District officers, and between 1881 and 1883 local fears were allayed
by the presence of federal quarantine inspectors. Yet in the summer
of 1883, with the expiration of the Quarantine Act of 1879, the Na-
tional Board of Health was finally defeated by its many enemies,
most of them outside the South.61 This result, however, consummat-
ing the efforts of Marine Hospital surgeon general John B. Hamilton
and Dr. Joseph Jones, was not altogether unexpected. In early April,
Dr. Thornton and Taxing District president David Park Hadden at-
tended the annual meeting of the Sanitary Council of the Mississippi
Valley in Jackson, Mississippi, which was boycotted by Jones and the
Louisiana board. Subsequently, when Hamilton placed one hundred
thousand dollars at Jones's disposal ostensibly for quarantine purposes, that was too much. 62 "It is well known," the Daily Avalanche contended, "that the policy of the Louisiana state board of health has been one of concealment of epidemics and freedom for New Orleans commerce without regard of the consequences to other communities." Memphis and the valley, cautioned the editor, "must look out for Dr. Joseph Jones." 63 In the summer of 1883 the Taxing District board of health assumed the added burden of quarantine surveillance on President's Island. 64

There is reason to believe that the pressure brought to bear on New Orleans's merchants by Memphis and other communities to the north had some bearing on the changes that ensued. Profitability of the Caribbean trade would be sacrificed if interior commerce was lost to the independent inland quarantines that resulted from fear. Moreover, stronger ties between Memphis and its mid-South trade area made business increasingly competitive and concession necessary. Whatever the reasons, Jones was replaced by Dr. Joseph Holt as president of the Louisiana State Board of Health in 1884 and, following its reorganization, things began to change. 65

"The new head of the Louisiana Board of Health is taking a step," noted the Daily Appeal on April 22, 1884, "which . . . will go far to restore, to the body of which he is president, that respect and confidence which it had forfeited." Following the national threat of cholera that summer and the meeting of the first national conference of state boards of health that fall, 66 Dr. Holt invited the health officers of the lower valley, including Dr. Thornton, to inspect the new Louisiana quarantine station on Pass-a-L'Outre, in the eastern Mississippi delta. Upon returning from the trip in mid-July 1885, Dr. Thornton declared himself impressed with what he had seen and heard. 67

Although Memphis continued to keep its own quarantine watch during the next two years, by 1887 a restoration of confidence had taken place. 68 "Dr. Joseph Holt," began an editorial in the Appeal on November 9, 1887, "is one of the most faithful and untiringly vigilant health officers in the Union." In praising Holt before the American Public Health Association's Memphis meeting that year, Dr. Thornton testified that Louisiana had perfected "the best system of quarantine ever enforced in this country." Also, he added, its state board of health was "entitled to the fullest honor and confidence." 69 For a survivor of the epidemics of 1878 and 1879, that was saying a great deal. The occasion of the APHA meeting in 1887 marked, for Memphis, the climax of nearly a decade of sacrificial labor, and its business and social leaders basked in the effusive compliments bestowed by
the visiting sanitarians. But beneath all the pride in tangible accomplishments lay an unabated fear of yellow fever.

"During last month," noted the editor of the local *Mississippi Valley Medical Monthly* in August 1887, "the annual rumor that Memphis had yellow fever was started by designing persons." The rumors never amounted to much, and for nine years yellow fever scarcely caused a ripple in the stream of city affairs. Even so, infection to the south was a continuing concern, for though only a total of nine deaths were recorded, New Orleans had cases of yellow fever every year between 1880 and 1887 except three. A watchful eye was also kept on outbreaks at Matamoros and Brownsville in 1882 and 1883. Nor did Dr. Thornton fail to notice events at Biloxi in 1886 or at Key West the following year. But the most serious outbreak of the decade occurred at Jacksonville, Florida. On the tenth anniversary of the terrible epidemic of 1878, a rumor turned Memphis upside down.

Following their city's declaration of quarantine against Jacksonville on August 10, 1888, Memphians responded to that community's call for help in September by sending contributions of almost $3,500. Yellow fever then appeared in Decatur, Alabama, on September 12, and rumors of its presence in Birmingham were circulated with the effect that Memphis levied quarantine against both. A report from Decatur a few days later stated that "the operator in the Western Union telegraph office, reported sick with yellow fever, which was maliciously false, is recovering rapidly." Nevertheless, Decatur was only two hundred miles away, and Memphis was frightened.

For years the shotgun quarantines of 1878 and 1879 had been denounced retrospectively by the local press as barbarous, uncivilized acts of irrational behavior. But in mid-September 1888, unreasoning fear was again taking hold in the Bluff City. "If the citizens of Memphis are not satisfied with the quarantine regulations of the authorities," urged an editorial in the *Avalanche*, "they might arrange for the establishment of a shotgun quarantine. It would be an easy matter to organize a force of five thousand men to form a circle around the city, permitting no one to return who passes out and none to come in who could not give a good account of himself. That is, at last, the best quarantine." By September 18 control was rapidly slipping out of the hands of city officials. Although the state board of health had assigned a local physician to be in charge of a city police detail of train inspectors a month previously, there was continued insistence by the merchants that this was not enough. Led by Napoleon Hill, the city's most prominent businessman, certain members of the merchants and
cotton exchanges, fearing that the work and sacrifice of a decade might be lost, constituted themselves an advisory committee and, backed by the local newspapers, began to pressure the city government. News received on September 20 that yellow fever had broken out in Jackson, Mississippi, had bombshell effect. On the following day, at the committee’s insistence, Taxing District president Hadden declared that a state of nonintercourse existed between Memphis and all points east of the Mississippi River. The merchants, supported by an excited public opinion, had taken over.

Wild rumors became so rife that the board of health employed a young physician whose sole duty was to track them down. There was one story that a black family from Jackson, Mississippi, had moved into a dwelling on Lauderdale Street two days previous to September 22. Inquiry revealed they had come from Jackson, Tennessee, and had been in Memphis for two months. Rumormongers were arrested by the police in an attempt to stifle the growing panic the merchants had made, and in the process civil liberties were very nearly suspended.

On the day the rumor concerning the black family surfaced, several hundred passengers on inbound trains, themselves refugees fleeing fever and rumors of fever elsewhere, were put off in the woods ten miles from Memphis during a heavy downpour. Their bewilderment and discomfort, however, was not the worst of it. Frightened rural residents not only refused to give them shelter, reported the Avalanche, but “the people in the country, taking the cue from us, are ready to shoot down the first stranger who approaches them.” Rumormongers were arrested by the police in an attempt to stifle the growing panic the merchants had made, and in the process civil liberties were very nearly suspended.

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The next day, September 23, two young white women, who were put off a Memphis and Charleston Railroad train at nearby White’s Station, were only able to get an aged black man to help them. That morning Menken and Company, the city’s largest dry goods store, had taken out a full front-page ad in the Appeal commending the advisory committee and stating: “To aid in this laudable work, we will make tomorrow a famous day in the annals of Memphis by offering our entire stock of new fall goods, amounting to over half a million dollars, at tremendous sacrifice.” The following day three local military companies were placed on guard surrounding the city.

In this atmosphere of tense fear bordering on panic, Dr. Bennett G. Henning, one of the city’s rising younger physicians, was summoned on September 25 to the rooms of an individual named Berry H. Binford on Poplar Street. Binford, a traveling salesman for a Cincinnati spice house, had recently been in Decatur. Dr. Henning added this information to Binford’s symptoms of high fever and vomiting and
called three other physicians, including Dr. Thornton, into consultation. There was no agreement among the doctors, however, whether or not Binford's symptoms were those of yellow fever. Meanwhile, the salesman's frightened wife was out spreading the alarm in the neighborhood, and by nightfall the city was a bedlam. Citizens fled in droves while the advisory committee dictated policy and demanded that Binford be removed to the city hospital.

The physician in charge at city hospital, Dr. J.E. Black, gave out a report at 1:00 A.M. on the morning of September 26 to the effect that Binford's condition was "improved." The patient's temperature was 99 degrees, his pulse rate was 104, and he appeared to be slowly sobering up! The medical press later admitted that the "leading etiological factor" in the Binford case had been "dipsomania of a somewhat grave character." It was learned that Binford had left Decatur on September 3 and had been drinking heavily in various Memphis saloons for four days prior to his collapse. When this revelation appeared in the newspapers on September 26-27, it became necessary to find a scapegoat. But instead of Binford or the advisory committee, the press chose the doctors.

At the outset Dr. Thornton had maintained that the quarantine inspection was adequate, but the merchants overrode his authority and forced the nonintercourse policy on Taxing District president Hadden. When the facts of the Binford case became known, there was an immediate demand from the businessmen that the embargo be lifted. Thornton took the attitude that the usurpers ought to stew in their own juices for a while longer, and though nonintercourse was lifted on September 27, the president of the board of health voted to sustain it. The encircling military guards were disbanded the same day, the merchant's advisory committee adjourned sine die, and the city returned to simple quarantine against infected places. Thirty thousand extra copies of the Sunday Avalanche on September 30 proclaimed an exalted state of city health and business prosperity in an effort "to repair the damage done by the events of the past few days." Frost occurred shortly after October 1, and within weeks there was business as usual.

Gerald M. Capers's description of Memphis after 1880 as a "new city" holds up under close scrutiny, notwithstanding the argument that the role of yellow fever in the city's history has been exaggerated. It was yellow fever that toppled Memphis's debt-ridden government in 1879, and it was fear of the fever's return that inspired the sanitary program of the 1880s. In 1880, following the Benthamite method of analysis employed earlier by Edwin Chadwick and Lemuel Shattuck,
John McLeod Keating reckoned the city's forfeiture to yellow fever between 1867 and 1879 at $37,500,000. This calculation included the loss of ten thousand lives capitalized at ten million dollars, diversion of trade, nursing and burial costs, and the expenses of refugees maintaining themselves away from home. In addition, according to Keating, Memphis lost not only 5,226 in population between 1870 and 1880 but also an anticipated increase of about 12,000. The penalty of this loss alone in productive capital, he figured, was approximately $17,226,000.  

Perhaps the editor's figures were somewhat strained, but in the minds of Memphis businessmen, taxpayers, and survivors of the yellow fever epidemics of the 1870s, there was no question concerning the impact of the fever on their lives and on their prospects for the future. From the governing business point of view, those prospects held out a continuing annual loss from epidemics or, at least, continuation of the city's far-flung notoriety for filth and a high death rate. Given these circumstances, little imagination was required to foresee severely diminished opportunities for capital formation.  

This understanding provided the sustaining motive of those who undertook the sanitary reform of Memphis during the Gilded Age. Whatever the shortcomings or even the outright failures of their efforts may have been, a critical northern medical publication expressed its opinion in 1889 that "the change that has come over . . . [Memphis] in less than ten years seems more like the tales of romance than the mere realization of a scientific and economic truth."
The Sanitary Question in Atlanta

Atlanta's civic experience down to the end of Reconstruction, unlike that of New Orleans and Memphis during the same period, was characterized by the absence of great epidemics of Asiatic cholera and yellow fever that scourged so many southern communities. This good fortune was attributed time and again in public discourse to Atlanta pluck and spirit, above all to altitude, and occasionally to Christian virtue. Indeed, the Puritan emphasis on work and success brought by the town's early Yankee settlers was the very bedrock of the New South creed. Yet by 1877 only a pitiful few and meager provisions for public health—the "sanitary question," as it was infrequently referred to in the public prints—had been made by the city government. In this respect, Atlanta was very much like New Orleans and Memphis. In the Georgia town, however, annual elections, resulting in uncertain leadership, and fragmentation of authority within the city council made planning for and completion of municipal projects difficult at best.

In late August 1878, as the yellow fever epidemics in New Orleans, Memphis, and other lower Mississippi Valley towns reached catastrophic proportions, the Atlanta Constitution sought to impress upon Atlantans what it believed to be the lessons of their suffering. The urban South was backward in sanitary matters, asserted a biting editorial on August 27, and since penalties for neglect must inevitably be paid, the stricken cities and towns were now reaping the wages of negligence. At the same time, however, the sins of others served as both reminder and rebuke to the Gate City's complacency. Warming to his task, the writer admonished:

Let not Atlanta think that she is not as other southern cities are. She is in fact the worst one of the entire number. She absolutely has no comprehensive system of removing filth. Nine-tenths of the city is absolutely innocent of any progressive sanitary step. Every block contains pig pens, filthy stalls, pens of animals for slaughter, decayed water closets, or other filth laboratories. We are verging towards a city of 50,000 people, and yet
to-day we are in the backwoods as far as sanitary reform is concerned. We must throw off our rustic habits that may be maintained with impunity in hamlets, but which lead straight to disease and death in a crowded population. Our sanitary situation must be remodeled. Nuisances must be driven by the wholesale out of the city's limits, and a comprehensive system for the removal of filth inaugurated. We have gone on inviting death to enter in until the old scythe-bearer is at our doors. The people demand a change, and woe to the men in authority who carelessly let these busy and enterprising people drift to an epidemic that would ruin the reputation that the city is naturally entitled to, when it can easily be averted.

This call to action on behalf of community elites, "these busy and enterprising people," underlined the need for "a comprehensive system." In New Orleans, in the aftermath of the epidemic, the local medical society outlined a comprehensive program of sanitary reform. In Memphis, the needed improvements were specified by the National Board of Health's sanitary survey. But in Atlanta, despite the Constitution's warning appeal for systematic, concerted action, the record of a decade would show that there had never been a clear, coherent plan.

The city elections in December 1878, followed by the Christmas holiday, offered Atlantans a bit of welcome relief from the summer's tensions. But the air of relaxation seemed tempered by a realization that the city had experienced a close call, that health precautions were indeed lacking, and that what the coming season might bring no one knew. On February 17, 1879, amid this somewhat tense atmosphere, the board of health, composed of the city physicians, presented the city council with a lengthy list of recommendations concerning the city's sanitary condition and stressing the urgency of the moment. The Constitution backed the board's recommendations with a caustic editorial entitled "Will the City Council Listen?" in which it was charged "that there has been during the past four years an almost criminal neglect of sanitary regulations in Atlanta." The council responded by ordering the chief of police to carry out the board of health's directions.

Then, on April 7, the council enacted the most significant public health ordinance in the city's history to that time. Under its provisions two regular police officers, appointed by and responsible to the Board of Police Commissioners, were designated sanitary inspectors and charged specifically with the enforcement of health ordinances. These officers were also responsible for seeing that garbage, street filth, and the contents of all privies within the fire limits were removed once each week, and toward these ends they were given reg-
ular supervision of the city scavenger carts and, when necessary, the street carts. To fund this undertaking, a new sanitation tax was imposed on every improved lot within the fire limits. Those without water connections were assessed two dollars annually; those having water connections (which theoretically made sewer connection mandatory) were assessed one dollar. Later, in the summer, the council enacted yet another sanitary measure defining various categories of nuisances.

Hardly less significant was the council's action affecting the board of health. During the preceding summer's crisis, the Constitution had backed the weak board, periodically praising its chairman, Dr. A.J. Pinson, and the other city physicians for their energy and dedication. But it had also condemned the board's lack of authority and ineffectuality. On October 20, 1878, the same newspaper published a bill, scheduled to be introduced at the upcoming session of the legislature, providing for the creation of a city board of street and health commissioners. The proposed board was to be composed of the mayor, one alderman, one councilman, and two other commissioners to be elected by the general council for three-year terms. The commissioners were to have power to employ a health officer, a city inspector, and a city engineer, and the authority of the board and its officers was to be enforced through the police department. Upon passage of the bill, the existing board of health was to be dissolved. What the proposed legislation actually sought to establish was a municipal board of public works, and it was subsequently defeated. The situation remained unchanged in March 1879 when the Constitution, directing the public's attention to the overworked city physicians, called for the creation of a new board of health to be composed of Atlanta's leading physicians and businessmen. Whatever was done, the Constitution argued, "one thing is very certain: we must keep the city healthful, and it will require a reform to accomplish this."

During a regular meeting of the city council on June 16 the Right Reverend John W. Beckwith, Episcopal bishop of the diocese of Georgia, presented a memorial on behalf of a committee of the Georgia Academy of Science, urging the council to consider Atlanta's sanitary needs "not merely with reference to the immediate demands of the present season, but with reference to the more imperative demands of the indefinite future." At the beginning of his presentation, Bishop Beckwith asked the councilmen to lay aside consideration of "humanitarian views," "the poverty and tears of widows and orphans," and "moral obligations" and to "look at the question simply in its financial aspect." He then reviewed the probable consequences of a fatal
epidemic: loss of Atlanta's valuable reputation for health; loss of population and additions thereto; loss of capital accompanied by decline of both commercial and manufacturing prospects; loss of skilled workers and professional men; decline of real estate values, rural markets, and railroad investments; deterioration of municipal credit and increased taxes; and, finally, general business collapse. "We have only to continue our neglect of the laws of health," said the cleric, "and the visitation of epidemic disease is only a question of time. The day of sickness will surely come." Yet, he added, a few thousand dollars wisely expended could forestall disaster and would actually represent an investment in security rather than an expenditure. As to precisely what should be done, the Academy of Science would not presume upon the wisdom of the honorable council. "One thing only we venture to suggest," said the bishop in conclusion. "We think there should be a board of health, existing independently, clothed with authority and power, and composed among others, of some of our ablest physicians and most advanced scientists." After Bishop Beckwith retired from the council chambers, that body passed on first reading an ordinance reorganizing the board of health, and before the session adjourned, the members of the new board were elected. 9

The ordinance provided for a board of health consisting of five members, one from each ward, three of whom were to be physicians and all to be elected annually by the city council. At the new board's first meeting on July 1, 1879, Drs. William S. Armstrong and James B. Baird were elected president and secretary respectively, positions they held until 1893. The salaries of four board members were fixed at one hundred dollars per year and that of the secretary at two hundred dollars. This reorganization of the board of health, however, the sixth in a decade, represented little or no change in municipal policy. 10 Though required to cooperate with the board of health, the two sanitary inspectors were primarily responsible to the police department, and waste removal remained under the direction of the council's Committee on Streets. In effect, the new board was granted no real authority. It could do little more than report nuisances and make recommendations to the city council, as it had in the past. 11 Moreover, there was no plan establishing aims or goals for improvements of conditions affecting the public health.

In 1881, however, the threat of a smallpox epidemic, which brought renewed concern over sanitary conditions, resulted in a development that strengthened the board and gave it a measure of independence. On September 3 the legislature approved amendments
to the city charter requiring that the board of health elected in January 1882 be composed of five members chosen without regard to ward residence and, further, that one member be elected for one year, two for two years, and two for three years. The amendments also authorized the mayor and council to increase the minimum sanitary tax to three dollars per improved lot and stipulated that "the amount so collected shall be used for sanitary purposes only." In order to ensure this result, the council was directed to appropriate each May the probable income from the sanitary tax, "the same to be expended by the Board of Health of [Atlanta] for such purposes."\(^{12}\)

Accordingly, on January 17, 1882, the city council enacted an ordinance establishing the new procedure for electing members to the board of health and requiring that the board submit an annual budget during January of each year. It also provided for the council Committee on Sanitary Affairs, under which the board of health was to exercise direct authority over a sanitary department force consisting of inspectors designated as "special policemen" and laborers. Bylaws adopted by the new board spelled out the responsibilities of officers and employees. The duties of the secretary required that he "keep a correct record of the proceedings of the Board, issue notices of regular and called meetings, audit all accounts and payrolls to be paid out of the sanitary appropriation, and keep a record of the amounts of all bills approved and in whose favor, and discharge such other duties as usually pertain to the office."\(^{13}\) Considering his responsibilities, the board's secretary, Dr. James B. Baird, was actually the city's chief health officer.

Between 1882 and 1888 the board of health gradually became a more effective force for public health. Publication of an annual report began in 1879, but for the first three years it amounted to little more than a summary of recommendations to the city council. After 1881 the reports tended increasingly to become records of accomplishments, and for the first time an official effort was made to provide information concerning the prevalence of diseases and the city's annual death rate.

By law physicians, midwives, undertakers, and the city sexton were required to make regular reports of births and deaths to the city clerk, who kept a registry of vital statistics. But the law was loosely enforced, and consequently, the city sexton's reports and the records of the badly overcrowded Oakland Cemetery were the principal sources for the numbers and causes of deaths. Many deceased paupers had never been seen by a doctor, and in those cases the sexton simply guessed at the fatal cause. When deaths occurred under what
were considered unusual or suspicious circumstances, an inquest was conducted by the Fulton County coroner. An important step toward the procurement of reliable vital statistics was taken in 1887 when an ordinance assigning responsibility to the board of health for registration of deaths and issuance of burial certificates was enacted by the city council.\textsuperscript{14}

Overcrowding of Oakland Cemetery not only presented difficulties in keeping accurate burial records, but in 1883 Dr. Baird became convinced that the city's oldest burial ground, which had been brought within the city limits in 1866, was a direct menace to public health. Through his efforts and those of the Reverend Dr. Henry H. Tucker, a prominent Baptist clergyman and editor of the \textit{Christian Index}, the Westview Cemetery Association was organized by white citizens under municipal sponsorship in 1884, and the following year the city council enacted ordinances strictly regulating further interments in Oakland. Soon afterward the \textit{Constitution} reported that a group of leading black citizens had purchased a twenty-five-acre tract four miles from the city for use as a cemetery.\textsuperscript{15}

The board of health also attempted to protect Atlantans from unwholesome food, contaminated water, and adulterated milk. Following abolition of the city market house in 1870, the oversight of food had become an increasingly difficult problem. The \textit{Constitution} editorialized regularly on the subject during the early 1880s, and the board of health's report for 1883 insisted that "a properly located and judiciously constructed central market-house" was essential for effective control over the quality of meat and produce offered for sale.\textsuperscript{16} But the market house question was politically divisive, and the city council consistently refused to confront it. By way of compromise, however, the council enacted an ordinance in 1883 granting the board's sanitary inspectors authority to condemn unwholesome meat, fruit, and vegetables, and in 1886 their authority was extended to include local slaughterhouses. Yet not until 1888, when the number of sanitary inspectors was increased from two to five, did the board's campaign against spoiled and otherwise unfit food begin to assume effective proportions, and even then it labored under serious handicaps.\textsuperscript{17}

In an effort to improve detection of adulterated food and milk, as well as to monitor the safety of Atlanta's water supply, Dr. Baird announced the board's appointment of John M. McCandless in 1886 to the position of analytical chemist. McCandless soon found that extensive adulteration of food and milk was being practiced, that the city waterworks reservoir was heavily contaminated with sewage fol-
The Sanitary Question in Atlanta

Following rains, and that the purity of the expensive artesian well project just completed by the city council's Board of Water Commissioners was highly suspect. Given the limitations on its authority, the board of health was powerless to act against the waterworks and the artesian well. But when the chemist found that a number of private wells were also contaminated, the board's sanitary inspectors, acting under their broad authority to effect the abatement of nuisances, ordered them closed.

McCandless's analyses of milk distributed in the city showed that much of it, aside from being adulterated with water, contained raw sewage. Investigations of local dairies, which along with other stock pens had been relegated beyond the city limits in 1878, revealed filthy lots and sheds and diseased cows. It was also determined that the cows were pastured in areas where the animals drank from streams polluted by the outfall of city sewers. Dr. Baird described these conditions in a public letter published in both the Constitution and the Journal on July 1, 1888. Two weeks later the city council adopted an ordinance framed by the board of health establishing strict standards for livestock inspection, dairy sanitation, and the quality of milk to be sold in Atlanta.

Early in 1883 the Constitution asserted that "the board [of health] has accomplished a great deal . . . considering the pitiful economy which has limited and crippled its labors." When the board's sixth annual report was issued in 1885, the same paper praised its good work "in educating the people to understand and appreciate the importance and necessity of sanitation." But there was also cause for deep regret that the board "should have its usefulness limited by the exercise of an economy that cannot but prove costly in the long run." The Atlanta Medical and Surgical Journal understated matters the following year when it noted "that all has not been accomplished which is desirable for the attainment of a hygienic status in accordance with the progressive spirit manifested by our city authorities in other matters." What these criticisms implied was that the board of health was inadequately financed, that its work was too narrowly focused, and that there was no clear plan of public health objectives.

Prior to 1882 receipts from the sanitary tax instituted in 1879 amounted to approximately two thousand dollars per year, and these funds were expended at the discretion of the city council's Committee on Streets. Following the charter amendments in September 1881, which raised the maximum sanitary assessment from two dollars per improved lot to three dollars and granted the board of health authority to receive and administer the revenue, income for sanitary
purposes in 1882 amounted to $8,859. Two years later, in 1884, extension of sanitary services produced an increase in revenue to $12,120. The procedure established by the ordinance of January 17, 1882, required the board of health to prepare a budget each January showing anticipated receipts from the sanitary tax. Then in May, when the city budget was acted upon, an appropriation was made to the sanitary department along with other departments of the municipal government.

In 1886, for example, the board budgeted expenditures for the year of $25,000 and estimated receipts from the sanitary tax at $13,750. In May the city council appropriated $20,000 to the sanitary department and then in October made a supplemental appropriation of $5,000. As it turned out, the sanitary tax for 1886 produced $14,679 in revenue, and since actual expenditures came to $23,818.45, the board carried an unexpended balance of $1,181.55 over to 1887. During 1888 the sanitary tax brought in $19,266, but due to the scare resulting from the yellow fever epidemic in Jacksonville, Florida, that year, the board actually expended $42,146.82. Throughout the decade the greater portion of the board’s funds was expended on the waste and garbage removal service of the sanitary department.

The two police officers designated sanitary inspectors by virtue of the city ordinance enacted April 7, 1879, were primarily responsible for securing public compliance with health ordinances and for supervising operation of the city scavenger carts. By the same ordinance, the city was divided into two sanitary districts within the fire limits, which meant the business and residential section having the advantage of municipal fire protection at the center of town. The small scavenger force, consisting of four garbage carts and four nightsoil carts in 1880, divided its labors between the two districts. Both garbage and nightsoil were removed from assessed premises without waterworks connections, which were the great majority, but those having connections received garbage service only. One of the glaring inequities of the system was that business premises, such as hotels and manufacturing establishments, were assessed the same as the smallest dwellings.

The scavenger force was also responsible for street cleaning within the two districts. Two additional garbage carts were acquired in 1881, and that service seemed fairly satisfactory, but the regular and efficient removal of privy contents proved to be a major problem. During the preceding year, at the behest of the board of health, the city council enacted an ordinance forbidding the use of all but surface privies and requiring that a modified Rochedale arrangement, using dry
earth as a covering, be strictly adhered to. Even so, only 763 privies were reported as being emptied regularly—approximately one-fifth of the total number in the city—and in 1881 the Atlanta Medical and Surgical Journal noted Atlanta's need of a better system "for removing unhealthy accumulations."  

When the sanitary department was formed in 1882, the same two police officers, Thomas Veal and Willis King, continued to serve as sanitary inspectors under the authority of the board of health. In accordance with bylaws adopted by the board, the inspectors were required to give bond in the amount of five hundred dollars "to insure faithful performance of their duties." These included oversight of equipment and laborers, visitation of all parts of the city to "rigidly enforce compliance with all sanitary ordinances," supervision of periodic flushing of sewers, and maintenance of precise daily records of all sanitary work accomplished. In addition, the inspectors were responsible for weekly payrolls and the payment of department laborers. They were also required to attend all meetings of the board of health, to submit consolidated reports of work done by the sanitary force, and to report on any other matter "that it may be thought desirable to bring before the Board."

During ensuing years the sanitary department was able to secure more effective enforcement of sanitary ordinances and to render more efficient waste removal service. In 1883 inspectors Veal and King served 2,561 notices ordering abatement of nuisances (most of which concerned privies) and presented 186 cases in the recorder's court, in which 167 defendants were fined for violation of health ordinances. The two sanitary districts, or "limits," as they were commonly called, were increased from service to 1,366 premises in 1881 to 4,341 in 1884. In the latter year the sanitary force consisted of thirty-two laborers who manned six nightsoil carts, which made weekly collections, and twelve garbage carts, which collected refuse three times a week, daily, or even oftener, depending on whether the premises were commercial or residential.

An improved garbage ordinance enacted in 1883, which was printed up in handbills and distributed by the police department, stipulated that sweepings, garbage, or other accumulations of filth be placed "in a sound and suitable box or other proper receptacle." The box was to be placed at the edge of the sidewalk between 7:00 and 8:00 A.M. every day except Sundays and removed immediately after being emptied. In 1884, however, the sanitary districts comprised little more than one-third of the area within the city limits, and those neighborhoods inhabited by blacks and the poorest whites received
no waste removal service whatsoever. Yet at the same time, general tax revenues from the entire city went into the council’s annual appropriation for the sanitary department. Moreover, the collected excreta, garbage, and other waste were dumped near thickly settled portions of town, and in 1883 and again in 1884 aroused citizens secured court orders that compelled the board of health to relocate the dumping grounds. Following the second relocation, the Journal observed that the waste disposal issue was “a vexed one” and that it was also “still unsettled.”

The sanitary limits were not extended at all in 1885, and only a slight extension in 1886 brought the total number of premises served to 5,211. As a result of the yellow fever panic in 1888, the city council awarded the board of health a grant of five thousand dollars above its regular appropriation. This enabled the sanitary department to more than double its labor force to better serve 6,544 premises and to increase the number of two-horse nuisance wagons and one-horse garbage carts to eleven and thirty-six respectively. The yellow fever scare was also responsible for a decision to divide the two sanitary districts into four and to appoint three new sanitary inspectors. Officer Veal was promoted to the rank of chief sanitary inspector, equivalent to that of police captain, and his new duties, in addition to the supervision of subordinate inspectors, involved oversight of all dairies and slaughterhouses and responsibility for departmental stables, livestock, and equipment at the city dumping ground.

In reviewing the department’s work for 1888, Dr. Baird reported that the garbage service gave general satisfaction and that his office had on file numerous applications from citizens who wished to enjoy its advantages. He also noted that the method of handling excrement from surface privies was unsightly and offensive since it was nearly impossible to compel residents to use a sufficient amount of dry earth or ashes. Yet, he concluded, “until better means come within reach, it may be said to be fairly effective in its results.” Atlanta’s health officer also expressed the hope that during the coming year the city’s appropriation would allow extension of the sanitary service to a number of thickly settled neighborhoods.

Perhaps the most formidable obstacle to expansion of the waste removal service, apart from the sanitary department’s budgetary limitations, was the deplorable condition of city streets. In 1880 Atlanta had one hundred miles of streets, of which three miles within the business district were surfaced partly with wooden blocks and partly with what the authorities called “macadam pavement,” but which the federal census of that year described more accurately as “broken stone.” The remaining ninety-seven miles were improved only by
rough stone curbing and gutters, which were the sole means of distinguishing the sidewalks from the streets.

All of the streets, whether paved or not, were a menace to public health, since none were graded in the interest of controlling surface drainage. Storm water overflow from streets onto adjacent property caused flooding and other adverse effects, which in turn resulted in considerable litigation between citizens and the city government. Outside the business district, wheel transportation was hazardous most of the time. During the rainy season, wagon wheels sank in mud to the hub or higher, and dray animals suffered broken legs or necks and sometimes even drowned. As the deep ruts hardened in dry weather, a sharp eye and no little skill were needed by drivers of teams and carriages to avoid overturning or breaking an axle. On breezy days clouds of dust swirled about the streets and through doors and windows of nearby houses.\(^\text{27}\)

Prior to December 1881 responsibility for street development and maintenance belonged to the city council Committee on Streets. Under the city charter of 1874, the old practice of holding residents liable for street work was retained, and the council was authorized to levy a tax in lieu thereof. Persons failing to remit the tax or refusing to perform street labor were fined by the recorder, and upon nonpayment they were sent to the city stockade and employed along with other prisoners in the chain gang working the streets. The overwhelming majority of those sentenced to the stockade for all offenses were blacks, and thus, whether voluntarily or otherwise, the poorest blacks usually made up the bulk of the street committee's work force.

During 1879, $4,035.45 in fines levied by the recorder were worked out on the streets, and early the same year the legislature enacted a law requiring the Fulton County ordinary to work the county chain gang in Atlanta according to the city's proportion of the overall county population. The resulting surfeit of convict labor was such, the street committee reported, that "we were forced to the necessity of procuring a quarry at which to employ our women and small boys who are sentenced from the Recorder's Court, and in this way repair our worn-out streets with a class of labor heretofore an expense to our city, but now, under the working of this system, a source of revenue."\(^\text{28}\)

The city council's appropriations of $16,000 and $19,500 for streets in 1879 and 1880 respectively, however, were insufficient even for temporary repairs, and the quality of work done by the chain gang was very poor. The street committee's report for 1880 stated that the majority of convicts were boys and women and that "the few men we had were a trifling set; the majority of them are very badly diseased."
In acknowledging that the results obtained from such labor were small, the committee conceded that “if the amount of money paid in feeding and guarding this class of people were paid to laborers, it would accomplish much more work.” The Constitution complained in an editorial on January 8, 1881, that “scores of streets in the city have not been worked for years” and called on the newly elected administration to take action. Citizens had “paddled in mud and slush until their patience is worn out,” the writer warned, “and from the rumbling of dissatisfaction an outburst of indignation may be looked for if no relief comes from the officials now in power.”

In December 1880 James W. English, owner of the Chattahoochee Brick Company and, next to former governor Joseph E. Brown, perhaps the state’s largest lessee of convict labor, was narrowly elected mayor of Atlanta over Hannibal I. Kimball, the flamboyant carpet-bagger-entrepreneur, in a closely contested race. After English assumed office in 1881, the legislature approved amendments to the city charter on September 3 providing for reorganization of the board of health and creating the new municipal Board of Commissioners of Streets and Sewers. In his valedictory address sixteen months later, Mayor English stated: “I favored the establishment of [the board of commissioners] and advocated the preparation and passage of the bill which authorized it.”

The enabling amendments to the city charter provided for the election of three street and sewer commissioners by the mayor and city council at their first meeting in December 1881 (prior to the city elections that same month) for terms of one, two, and three years respectively, beginning January 1, 1882. Successors to the original members of the commission were to be elected for terms of three years. It was further provided that the commissioners’ compensation could not be altered during their tenures, and it was also stipulated that “no member of said board shall at any time be interested, directly or indirectly, in any contract of any kind with the city or any of its departments” under penalty of prosecution. The commissioners were authorized to submit budgets and receive appropriations annually, as did other departments of the city government, and they were granted “full and complete control of all work of every kind to be done on the streets and sewers of said city . . . Provided, that the Mayor and General Council of said city shall alone have power to determine when streets shall be widened or extended, or new streets opened, and when and where new sewers shall be constructed.” In order to carry out its work, the new board was empowered to employ a superintendent of streets and sewers.
Shortly, the city council enacted an ordinance providing that the city would bear one-third of the cost of street improvements and the whole cost of constructing main trunk sewers. It also provided, however, that property owners would assume, by a special tax, two-thirds of the cost of street improvements and the whole costs of sidewalks and connecting sewer drains. In an editorial on December 1, 1881, the Constitution drew attention to the forthcoming election of commissioners of streets and sewers scheduled for the following week. While emphasizing the importance of public works, the newspaper warned readers that “it will be calamitous indeed if this great and essential work is entrusted to corrupt or incompetent hands. It will be a sad thing if so vital a matter shall be put in the hands of men who are weak enough to be fooled or bad enough to huckster the contracts out. If the work is confided to strong, honest, and devoted men, we believe the tax payers will make no resistance to the special tax, as onerous as it is. But if bad or weak men are put in charge, and we are treated with the scandals that usually attend the paving contracts of large cities, the authorities will find that they will have to wring every dollar of the tax from reluctant hands, and at the end of a lawsuit.” The commissioner elected to the two-year term was William H. Venable, a frequent seeker of public office, who was also part owner of a granite quarry at Stone Mountain and, like Mayor English, a large lessee of convict labor.32

During the ensuing two and a half years the city government found itself compelled to wring almost “every dollar of the tax from reluctant hands, and at the end of a lawsuit.” From the outset the commissioners were, according to their accounts, the objects of “opposition” and verbal “assaults,” and during the administration of Mayor John B. Goodwin in 1883–84 they complained of further “trials and antagonisms” resulting from the fact that “the hearty, active and cheerful co-operation of the Mayor and the General Council was wanting.”33 Part of the difficulty was due to conflicts over administrative authority between the commissioners of streets and sewers and the two council groups, the Committee on Streets and the Committee on Sewers and Drains. But the greater problem arose from the initially large and subsequently increasing expenditures for paving Alabama Street and other principal business thoroughfares with granite blocks and for surfacing sidewalks with material described as “first quality river brick”—all done with convict labor.

Expenditures rose from $127,721.11 in 1882 to $252,107.23 in 1883 to $303,553.82 in 1884. Nearly 67 percent of this burden fell upon property owners in the form of a direct tax. Taxpayer resistance, egged on
by the *Journal*, soon clogged the Atlanta city courts, the Fulton County Superior Court, and the Supreme Court of the State of Georgia with suits pending decision. When tax payments fell off sharply, the city government became strapped for funds. This caused the city's public schools to be closed during part of the 1883–84 school year, and in 1884 Mayor Goodwin was obliged to dip into the city's contingency fund in order to offset revenue deficits.34

As conflict between the city council and the Board of Street and Sewer Commissioners intensified, Mayor Goodwin proposed early in 1884 to grant property owners relief by reducing the city property tax rate from 1.5 percent to 1.33 percent. This move was opposed by both the *Constitution* and the *Journal*, and it failed to materialize. Then, during the summer, the board of commissioners was rocked by the revelation of corruption. Charges described by the *Constitution* as "five ply deep" were brought against James Bent, the superintendent of streets and sewers, who was tried before the board on July 8. A parade of witnesses testified that Bent had padded the street and sewer department payroll and that he had appropriated convict labor and departmental materials for his personal use. Bent pled not guilty, and his superiors, by a vote of two to one, adopted a resolution reported in the newspapers as "setting forth the fact that there was [sic] some indications of conduct unbecoming an official and that they ought not to be repeated but that the evidence did not sustain the charges."35

Widespread condemnation of the board of commissioners brought about Bent's resignation a week later, and the board and its many questionable practices were hot issues in the December city elections. Soon after taking office in 1885, Mayor George Hillyer, a former judge of the Fulton County Superior Court, instituted proceedings to amend the city charter, and on October 3, 1885, the Board of Street and Sewer Commissioners was abolished by act of the legislature.36

At the same time, the state assembly created the office of commissioner of public works, to be filled by popular election beginning in December 1886. In the interim, City Engineer R.M. Clayton served as acting commissioner, and as a result of the election in 1886, Michael Mahoney, former chairman of the city council's Committee on Streets, assumed the duties of Atlanta's first commissioner of public works. During 1885 and 1886 City Engineer Clayton, under the guidance of council committees, reduced expenditures for streets and sewers to $126,504.29 and $92,447.13 respectively. Commissioner Mahoney's department expended only $66,440.88 in 1887, but during the following year, as a result of greatly increased revenues and the
yellow fever panic, the outlay for streets and sewers rose to $325,763.99. Moreover, the amount of work actually accomplished after 1885 was nearly equal to that done in previous years. The results of six years of public works showed that in 1888 Atlanta had slightly over twenty-two and one-half miles of paved streets, mostly in the business and better residential sections, and eighty-four miles of surfaced sidewalks. The greatest improvement, however, was in the quality of grading and gutter work done after 1885, which helped to ameliorate the city's steadily worsening drainage problems. Yet there is reason to believe that during most of those six years the process of letting contracts for public works was riddled with corruption. In 1888 the greater part of Atlanta streets was still in a primitive condition.

Only those streets paved with granite blocks in the business section—the highest part of town—were considered genuinely satisfactory, a situation attributable primarily to inadequate and defective drainage and sewerage. In 1879 the city's combined drainage and sewerage facilities consisted of seven miles of large, crudely constructed sewer trunks, connected by smaller lateral drains with certain business houses, hotels, and the finer residences. A city ordinance required that all buildings having waterworks connections also be connected with sewers. But the high cost and poor quality of waterworks service limited its use to commercial and industrial customers. Due to utter lack of planning, most city buildings throughout the 1880s either had water connections but were near no sewers, or were proximate to sewers but had no water connections. In 1879 less than one-tenth of the area within the city limits was drained by the trunk sewers, which were, after all, primarily intended to carry off storm water and its washings from streets and lots.

Most premises contained vault privies, whose number the Constitution estimated to be in the "hundreds, if not thousands," but in the short-lived wave of enthusiasm for sanitary reform following the yellow fever epidemic in 1878, the privy came under attack. In 1880, as noted above, the city council adopted an ordinance prohibiting further use of privy vaults and requiring instead utilization of surface privies equipped with watertight receptacles. So aggressively did the sanitary inspectors enforce this ordinance that by the end of the following year the board of health was able to make the remarkable, and equally questionable, report "that not a single privy-vault or cesspool exists within the corporate limits of Atlanta." Handbills were distributed by the police department in the summer of 1883 informing citizens of a modification in the law requiring all surface privies to
be constructed in a manner and place readily accessible to the sanita-
tary department’s nightsoil carts. Yet another ordinance enacted in
1885 prohibited the further use of surface privies within the fire limits
without a permit from the board of health. 40

The board’s objective was to encourage the adoption of water clos-
ets, although Dr. Baird was aware that neither proper standards for
sanitary plumbing nor adequate sewer facilities were available. There
was a spurt of sewer construction and repair work in the spring and
summer of 1879 made possible by a generous appropriation to the
city engineer’s department and carried forward under the supervi-
sion of the city council Committee on Sewers and Drains. Funds and
initiative slacked off during the next three years, however, and in
1882 the total expenditure for drainage was about five hundred dol-
lars for repairs and maintenance. At this juncture, responsibility for
drainage was taken over by the street and sewer department orga-
nized under the newly created Board of Street and Sewer Commis-
sioners. Aside from the fact that its brief existence was marked by
fraud and corruption, the board’s expenditures for sewers in 1883
was just $23,633.70, of which only slightly more than half was de-
voted to the trunk sewers paid for wholly by the city. In 1884 consid-
erably less than 10 percent of the board’s appropriation of more than
three hundred thousand dollars went toward badly needed extension
of the trunk sewers. At the same time, the board of health and city
newspapers repeatedly condemned the cheap, crude rock and con-
crete sewers that were being built and urged that either better quality
materials, such as brick and vitrified pipe, be used, or that carefully
dug open ditches be substituted temporarily until funds for proper
construction became available. 41

Citizens’ complaints against the overpowering stenches emanat-
ing from the sewer trunks, particularly during the summer months,
were relieved somewhat when the sanitary officers conducted peri-
odic flushing operations by opening waterworks valves. But the lim-
ited capacity of the waterworks allowed only a small flow of water,
which was wholly unequal to the task of moving waste through acute
angles in the rugged interiors of the large trunks. Moreover, the sew-
ers were known to house various species of varmints, and the deni-
zens of the Loyd Street sewer, especially, were notorious for their
nocturnal attacks on neighborhood chicken coops. 42

By the mid-1880s inadequate drainage and foul sewers constituted
Atlanta’s most serious public health problem, which was reflected in
the sharply increasing incidence of typhoid fever and a variety of en-
teric and diarrheal diseases. In its report for 1884 the board of health
urged the city council to secure the services of an expert sanitary engineer in planning a sewer system “based upon correct engineering and sanitary principles.” Early that year the Journal lamented “the poor, neglected temporary shift which now does duty as a sewage system for the capital of Georgia” and recommended consideration of the so-called West System advocated by Dr. A.N. Bell of New York, editor of The Sanitarian and an officer of the United States Sewer and Utilization Company.

In the spring of 1886 Mayor Hillyer together with members of the council Committee on Sanitary Affairs, the Committee on Sewers and Drains, and the board of health, consulted with Ernest W. Bowditch, a distinguished sanitary engineer from Boston, on the city’s drainage situation. Bowditch submitted a report to the city council in which he recommended a preliminary topographical survey of the city, which would cost an estimated $2,600. The report was referred to the Committee on Finance and was not heard of again. Later that fall, during intense intercity competition for the location of the Georgia Institute of Technology, the Macon Telegraph tried to gain advantage for its town by depicting Atlanta as poorly drained and unhealthy, an allegation that, judging from the Constitution’s shrill characterization of the ploy as an “amazing pitch of stupid hatred,” must have struck a tender nerve.

Although trunk sewer mileage increased from about eight in 1881 to approximately seventeen in 1887, Atlanta’s growth was so rapid that the sole result of modest annual extensions was to move sewer outfalls from one neighborhood to another. In his report for 1887 Dr. Baird noted with disgust that “another year has passed and no important progress has been made toward solving the problem of our city sewerage.” The results of feeble efforts to flush and disinfect the patchwork system, he wrote angrily, were easily discernible by sight and smell. But that which struck Atlanta’s health officer as even more outrageous was the continuation of past mistakes: “The old Loyd street sewer, from the Union Passenger Depot to East Fair street, has been condemned over and over again as a nuisance and a disgrace, yet, marvelous to relate, this pestiferous old subterranean cesspool has this very year been extended about three blocks, and all of the defects in this primitive rock structure have been followed and repeated in the new sections with a fidelity to the disgraceful characteristics of the model that would strike any intelligent sanitary engineer dumb with amazement and disgust.”

Dr. Baird was also deeply concerned that Atlanta’s rapid growth, with the accompanying demand for quick, cheap work, had resulted
in slipshod plumbing injurious to health. Beginning in 1882 he repeatedly urged passage of an ordinance providing for semiannual inspection by a qualified officer of all premises having water or sewer connections. Then, in the fall of 1888, in response to renewed demands for sanitary reform that came in the wake of the Jacksonville yellow fever epidemic, the city council enacted a stringent plumbing inspection ordinance. The authority of the plumbing inspector, whose duties were performed initially by Chief Sanitary Inspector Veal, was promptly challenged in the local courts and sustained.

Meanwhile, earlier in the year, Jacob Haas, the strongly prosanitary chairman of the council Committee on Sewers and Drains, secured the appointment of Rudolph Hering, a professionally well-known sanitary engineer from New York, to propose plans and estimates for a general sewer system for Atlanta. Construction of 2.14 miles of new sewers under the direction of Commissioner of Public Works Mahoney that same summer and fall followed the preliminary design mapped out by Hering. Dr. Baird was elated over what he considered "the most important sanitary advance ever attempted by this city." But the success of the new system depended on something the old had not had, a substantial volume of water for the carriage of waste. In 1888 that was not yet available.

During the 1870s some well-to-do Atlantans purchased drinking water delivered from Ponce de Leon and other outlying springs, but the great majority of residents were wholly dependent on public and private wells for their water supply. In 1878 the council Committee on Wells, Pumps and Cisterns maintained twenty-three public pumps and seven drinking fountains for the stated purposes of fire protection and watering livestock. Yet even then, and for many years afterward, hundreds of persons living in the central portion of the city relied chiefly on the public wells for drinking water. A somewhat larger number of residents in the same area drew water from wells of their own or purchased it from a neighbor. The results of a study published in the Atlanta Medical Register in 1883 showed that many wells were badly contaminated, and more than a year later the Constitution remarked editorially that "a large class of people actually suffer for [want of] good water."

The main sufferers were blacks, whose relation to the city's topography corresponded to their social status: their lots and wells received the drainage from premises above, since the extension of sewer outfalls invariably stopped in black neighborhoods. Commenting on the fact that the death rate among Atlanta's black residents was two and one-half times greater than that among whites in 1885, Mayor George Hillyer said: "I believe that if good clear water were
supplied to all the lower levels of the city, where so many of the colored people live, and their contaminated wells were all filled up and obliterated, a very marked change for the better would immediately appear."

By 1884 the growing realization that most shallow wells were contaminated by sewage and that their use was associated with much sickness produced demands for an alternate water supply. Numerous newspaper articles and editorials pointed up the efficacy of artesian wells elsewhere, and in March 1884 the Constitution announced that it was the duty of the municipal authorities to conduct a similar experiment in Atlanta. On August 21 an independent contractor began drilling a deep well in the center of the city (near the present site of Five Points), which ultimately reached a depth of more than two thousand feet, and in 1886, amid much rejoicing, the completed artesian well was incorporated into the municipal waterworks system. A subsequent report by waterworks superintendent William G. Richards showed that six and one-quarter miles of distributing pipes and seventy-three hydrants, supplied with metal cups attached by chains, were installed in the central part of town. Unfortunately, the jubilation proved to be short-lived when city chemist McCandless found the artesian well to be contaminated by surface drainage, and in its report for 1888 the board of health declared the well unsafe.

The remaining source of Atlanta's water supply was the city waterworks authorized by the legislature in 1870 and finally completed in 1875. Its principal function under the direction of the Board of Water Commissioners, which shared administrative authority with the council Committee on Waterworks, was to provide water in sufficient volume for adequate fire protection in the business district and to meet the requirements of railroad and industrial concerns. Yet Atlanta's growth during the 1870s was so rapid that the small reservoir and pumping station on South River were obsolete before their construction was finished. Following a severe drouth in 1881 and business losses from fires of nearly one million dollars during January and February 1882, new pumping machinery and a partial twenty-inch main were installed at the waterworks in July 1882 in an effort by the water commissioners to increase the plant's capacity from two million to six million gallons per day. These attempts to increase both volume and pressure were unsuccessful, however, and in August 1883 the four-hundred-room Kimball House, Atlanta's finest hotel, burned to the ground.

Fire insurance rates on business houses and dwellings rose sharply, as much as 100 percent in some sections of town, and an irate citizen complained in 1884 that while South River water was
excellent for drowning puppies, killing crabgrass, and dyeing white goods buff brown, it was unsuitable for bathing, cooking, and drinking purposes. One pump at the waterworks was down for nearly a whole year, and shortly following its repair in April 1885 the heavily overloaded sixteen-inch supply main burst, leaving the city without water from that source, bringing industry to a standstill, and generally creating alarm. At this juncture, the Hillyer administration proposed selling the works to a private company, but the sense of a meeting of five hundred businessmen held at the chamber of commerce on May 23, 1885, strongly opposed such a course of action. Instead, a special committee of forty of Atlanta's most prominent business leaders, including former governor Joseph E. Brown, Samuel Inman, and Joel Hurt, recommended the use of meters and filtration of the South River water. Accordingly, the Board of Water Commissioners began to require subscribers to purchase meters that year, and a city contract for a Hyatt filter system was consummated in 1886.53

As a result, Atlanta businessmen and industrialists were able to secure temporary satisfaction from clear water, the increased cost of which kept down the number of subscribers, thereby increasing volume and pressure. The meter rate of seventeen cents per thousand gallons, with a minimum charge of ten dollars per year in advance, was allegedly designed to curtail waste. It did reduce consumption greatly, particularly for sanitary purposes, a result which the Constitution related to the increasingly foul condition of city sewers. "Water that cleanses and drenches and purifies," admonished an editorial in the spring of 1887, "is not water wasted."54 Yet as the city grew, given the absence of a planned drainage system, the contents of the South River reservoir became increasingly suspect. The board of health's campaign to reduce the level of contamination resulted in the construction of a bypass canal in 1888, whereby the flow of the particularly notorious Todd's branch could be diverted from the reservoir during rains.55 Still, the volume of water available was inadequate, and household, business, and industrial needs, as well as planning for a new drainage system in 1888, required a more abundant supply.

In his famous speech "The Forgotten Man," first given in 1883, Yale professor William Graham Sumner contrasted a community's reaction to yellow fever with its day-to-day tolerance of pulmonary tuberculosis: "Whenever a pestilence like yellow fever breaks out in any city, our attention is especially attracted towards it, and our sympathies are excited for the sufferers. If contributions are called for, we readily respond. Yet the number of persons who die prematurely
from consumption every year greatly exceeds the deaths from yellow fever or any similar disease when it occurs, and the suffering entailed by consumption is very much greater. The suffering from consumption, however, never constitutes a public question or a subject of social discussion. Sumner probably had no particular community in mind, yet his remarks might have been aptly directed toward the rising city of the New South.

In Atlanta the decade 1878–88 opened and closed with spurts of sanitary reform occasioned by yellow fever epidemics. During the time between, a permanent and somewhat more effective board of health came into being. Yet its authority was limited, and jurisdiction over matters vital to the city’s health continued to be fragmented among various committees and departments of the city government. Dr. James B. Baird was a faithful and conscientious health officer, and the sanitary department appears to have made a modest showing of accomplishment considering its resources. According to Lawrence H. Larsen, “Health authorities in [southern] cities fortunate enough to have remained relatively free of epidemics were unable to convince elected officials of the need to give high priority to health services because the officials did not want to hurt their chances for reelection by implying that their city had a health problem.”

The most critical shortcoming of the decade, therefore, was the city government’s failure to deal with the increasingly serious problem of a contaminated environment, a condition clearly reflected by the horrendous mortality in the black population. Undoubtedly this failure was intimately related to the cumbersome council system and frequent turnover in office. But at all times, despite considerable infighting, the city government was controlled by a coterie of business elites and their political allies. It was they who directed the economic destiny of Atlanta, skimming the cream from the city’s prosperity while overlooking the spread of poverty and disease, especially among black people, in their very midst. Perhaps the tradition of self-congratulation for pluck and spirit had dulled their sensitivities. As the Constitution put it in its International Cotton Exposition edition in 1881: “If an old citizen of Atlanta was called upon to state what, in his opinion, had done more than any other one thing to establish Atlanta as a great city, he would say her site, fine climate, and perfect healthfulness.”
Public Health in the New South

The culmination of the New South crusade in little more than a decade following the disastrous yellow fever epidemic in 1878 also marked the end of the initial phase of the southern public health movement. Unfortunately, however, as Paul M. Gaston notes, "the South remained the poorest and economically least progressive section of the nation. The plans for regional and personal success, the restoration of self-confidence, and a position of influence and respect in the nation likewise fired the imagination and gained legions of adherents, but they too were largely unfulfilled and at the end of the New South crusade the region found itself in the uncomfortable, if familiar, role of a colonial dependent. Rid of many of the humiliating frustrations of the early postwar years, it was saddled with new ones that had greater staying power."1 Assessing southern urban development between 1860 and 1900, Howard N. Rabinowitz concludes that "continuity between urban development in the Old South and the New was more noteworthy than change."2

Evidences for such assessments are certainly available to those who seek them. In New Orleans, the primary goal of the volunteer sanitary movement had been to establish regional and national confidence in the city as a safe place of business and to regain at least some semblance of the commercial glory of yesteryear. There the group of business and professional men referred to by city newspapers over the years as the "faithful two hundred," men like Edward Fenner, George Horter, and Adolphe Schrieber, were the mainstays of hygienic efforts. Although a measure of external confidence had been won by 1888, however, local hopes for the dawn of a new era of prosperity through commercial expansion and industrialization were fated to be disappointed. The most important factor in the city's economy during the 1880s and 1890s turned out to be growth of its Latin American trade. In return for exports such as cotton, cotton by-products, grains, and lumber, New Orleans received increasing quantities of coffee, sugar, and tropical fruit. By the late 1880s the
fruit trade, especially, was the main factor in bringing the city a relative measure of modest prosperity.3

Without a doubt, the fundamental impediment to the city's economic growth and development, a basic deficiency of the entire southern economy, was lack of capital. C. Vann Woodward noted that in the fall of 1879 "New Orleans was handling more cotton and sugar than ever before, but she was neither erecting new buildings nor repairing many old ones."4 The newspaper of a small town in New Orleans's trade area complained in 1882 that terms through New Orleans banks and factors were restricted to three and six months, while at the North, six and twelve months could be had with discounts for cash. The Daily Picayune countered by claiming that the shorter terms were in the best interest of all parties concerned and alleged that "Northern traders who give six and twelve months are conspirators against the peace and dignity of Louisiana."5 Several years later a visiting reporter for Harper's noted that "the main trouble has been that the capital at hand has been insufficient."6

In 1880 New Orleans had 915 manufacturing establishments employing 9,504 workers whose products were valued at nearly nineteen million dollars. But most of the city's industrial works, such as cotton presses and cottonseed oil mills, rice mills, sugar refineries, lumber yards, foundries, and cooperage factories, were closely tied to its commercial interests. One student of New Orleans during the Gilded Age believes that geography was the determining factor in the city's failure to post industrial gains, that its remoteness from the interior valley made extensive manufacturing impractical.7 Editorials in city newspapers, praised by Mark Twain in 1882 as "not hack-grinding, but literature," however, continuously urged the necessity of industrialization upon the public.8 In attempting to explain "Why New Orleans Does Not Prosper," the Daily Picayune contended in 1884: "The true explanation of it lies in the fact that there are too many drones in the hive. The proportion of non-workers is so great that the year's net earnings of the whole community but suffice for its sustenance, and this because of the lack of manufacturing enterprises. Commerce is almost the sole dependence, and with the slim profits and commissions of the present day commerce will not enrich a city."9

Like many other southern journals, New Orleans newspapers viewed industry and immigration as two strands of the same fabric. They urged repeatedly that steps be taken to establish the Crescent City as second only to Castle Garden as a port of immigrant entry,
for, as *L'Abeille* put it, "sans industrie, pas de prospérité pour nous; sans immigration, pas d'industrie possible." The effort to attract these twin components of prosperity peaked with the opening of the New Orleans World's Industrial and Cotton Centennial Exposition in December 1884. A doubtful enterprise from the beginning, the exposition was forced to close in June 1885; after an ill-considered effort to reopen, its assets were finally sold at auction a year later. A careful study of the exposition concludes that New Orleans as well as the entire South "lacked an economic base to develop a viable industrial system and no number of cotton expositions, or emotional appeals for a New South, could change this simple fact."

The old river town on the Chickasaw Bluffs died in the yellow fever inferno of 1878, and during the milder but nonetheless terrifying outbreak of 1879 there were those who seriously proposed burning the town and sowing the site in salt. But in Memphis, as in New Orleans, the goal of the sanitary movement of the 1880s led by merchants, bankers, lawyers, and professional men such as David T. Porter, John Overton, Jr., and Luke E. Wright was to redeem the town's deathly reputation and make it a safe place for business. These were among the new men of the new order so perceptively described by Don H. Doyle. Consequently, the new Memphis that sprang up on the ruins of the old became a bustling, relatively prosperous mid-South commercial center. Unlike New Orleans, Memphis made a distinct break from its past, but like the Crescent City and other southern cities, the Bluff City was hedged about by economic difficulties that, in the long run and the short, proved difficult to overcome.

Chief among those difficulties was scarcity of capital. Annual clearings and balances, taken from the Memphis Clearing-House Reports, rose from $58 million in 1880 to $160 million in 1891. Yet according to a business history of the city, "local capital in Memphis simply was not available beyond the needs of the cotton economy." That single-crop economy, with the cotton factor at its center, made Cotton Row on Front Street a veritable beehive of activity from gathering time in the fall until after spring planting and, by the 1890s, brought Memphis the designation of world's largest inland cotton market. Many cotton factors, beside being bank presidents and board members, were also wholesale and retail grocery dealers, the "furnish men" of an earlier day. In 1891 Memphis was the fifth largest wholesale grocery market in the country, doing an even bigger business than the larger city of St. Louis.

The growth of Memphis as a cotton market for from four hundred thousand to seven hundred thousand bales annually during the
1880s was enhanced by the entrance of seven new railroad lines into the city. While riverboat traffic generally declined, the steamboat remained important by virtue of its accessibility to otherwise inaccessible points and its lower freight rates. Allied cotton industries contributing to economic growth during the 1880s included gins, compresses, warehousing, and mills producing cottonseed oil and cake. As a significant supplement to cotton, hardwood lumber took on ever-larger proportions in the local economy, and by 1891 Memphis was reputed to be the largest hardwood lumber market in the world. Industries allied to the lumber market included sawmills, cooperages, and manufacturers of doors, crating, and wagons.

All told, in 1888, Memphis had three hundred manufacturing establishments producing a value of approximately ten million dollars. Yet in the Bluff City, as in New Orleans, manufacturing was little more than an adjunct to commercial interests. According to a city business historian, beyond railroad ventures, eastern capital took little interest in Memphis, and local business leaders were conservative. “Many [plantation owners and factors] did have interests in real estate, but not in manufacturing.”

Exploiting fully the stigma of pestilence attached to New Orleans and Memphis, Atlanta’s phenomenal economic growth during the decade following the yellow fever epidemic of 1878, with businessmen such as Hannibal I. Kimball, John Inman, and Joel Hurt leading the way, was greater than that of any other city in the lower South. As we have seen, the sanitary movement was weaker there, since yellow fever, or any other disease for that matter, was not perceived as threatening to either the community or its business interests. Actually, however, aside from the importance of its strategic location as a railroad center, some of the influences accelerating Atlanta’s growth during the 1880s appear to have been purely serendipitous, although good fortune was invariably attributed to pluck and spirit. Chance side effects of the national depression beginning in 1873 made Atlanta the most important wholesale outlet in the entire South Atlantic region and were thus responsible for increasingly frequent references to the city as the New York of the South. Moreover, not only was the local impact of the Panic of 1873 relatively light, but the high level of economic activity attained during the immediate postwar years was also sustained, and to a degree augmented, by the fortuitous and advantageous consequences of yellow fever epidemics in New Orleans, Memphis, Savannah, and Brunswick in 1867, 1873, 1876, and 1878.

The Constitution’s annual business review edition on September 5, 1878, showed “systematic, harmonious, and thorough” developments
in home and business construction, manufacturing, and railroad feeder line extensions. Cotton receipts for the year leaped to an all-time high of 100,654 bales; the total volume of trade amounted to approximately $40 million; and the Atlanta post office handled more mail than that of any other city in the South.\textsuperscript{16} During the 1880s the annual threat posed by yellow fever to southern coastal cities and river towns such as New Orleans and Memphis continued to push business toward the interior, where Atlanta’s pricing advantages along with its superior warehousing and transportation facilities acted as magnets to attract it.

The key to Atlanta’s commercial and mostly home-financed industrial growth in the 1880s was the substantial capital resources of its banking institutions. Nevertheless, “although industrial entrepreneurs succeeded in controlling their labor force and acquiring capital and raw materials,” according to James Michael Russell, “Atlanta was not destined to be a large manufacturing city.”\textsuperscript{17} In 1880 the city had 196 manufacturing establishments representing a capital investment of $2,468,456 and employing 3,680 men, women, and children. The workers were paid $889,282 in wages, and their labor created products valued at $4,861,727. By 1883 the number of cotton factories had increased from one to three, and a thriving patent medicine industry was rapidly becoming a mainstay in the city’s economy.\textsuperscript{18}

In the same year the Georgia Pacific linked Atlanta with Birmingham, thus opening up a practically untapped market area to the southwest. This development, accompanied by almost continuous extension of feeder lines, helped to offset the effects of recession, while at the same time heavy migration from the surrounding rural countryside assured an abundant supply of cheap labor. In its Piedmont Exposition edition in 1887, the \textit{Constitution} boasted that in round numbers Atlanta had over nine million dollars invested in more than four hundred business and manufacturing establishments, which produced goods valued at fourteen million dollars. Payrolls for the city’s eleven thousand workers were estimated at six million dollars. Cotton receipts were reported to have reached nearly two hundred thousand bales, and the city’s total volume of trade was put at $110 million.\textsuperscript{19}

During the 1880s the chief drumbeater for the local business community was neither a chamber of commerce nor a merchants’ exchange, but rather the \textit{Constitution}. Under the aggressive management of Henry W. Grady, a principal spokesman for the New South, the newspaper extolled Atlanta’s accomplishments, sternly pointed out shortcomings, and ever urged the exploitation of new
opportunities. The International Cotton Exposition of 1881 and the Piedmont Exposition of 1887, aptly described by Woodward as "solemn circuses," were also surrogates for mercantile and industrial organizations. Yet the city's low tax rate, the aims and purposes of the Constitution and of the expositions, in short those economic resources of the community mobilized under the heading of pluck and spirit, were the underlying sources of Atlanta's prosperity. Business control over the local political process was such that decisions vital to community welfare were invariably made according to the test of business advantage.

In New Orleans, however, the drama of politics and government during the 1880s played out against the backdrop of the Crescent City's fundamental economic and political problem: the city debt. Though various attempts were made after 1877 to resolve the problem, the city debt in 1882 exceeded twenty-four million dollars. Much of this had been incurred during Reconstruction, a period when expenditures for local public works were unprecedented in both amount and fraud. In that same year, 1882, the city tax rate had risen to 3.175 percent of real property assessed at $103,975,662. Fourteen years later the assessed value of real property had increased to only $140,567,443, a poor rate of growth reflecting the fact that debt, high taxes, and depreciated property values constituted a basic long-term drag on the city's economy.

This also explains the city's inability to act in the emergency following the yellow fever epidemic in 1878, resulting in the purely voluntary movement initiated by the New Orleans Auxiliary Sanitary Association. Nevertheless, a start on the debt problem was made in 1882 when the administration of Mayor Joseph A. Shakspeare devised a funding plan based on forty-year, 6 percent coupon bonds. During his second administration, in 1890, Shakspeare worked out an arrangement for refunding the bonded debt through an issue of constitutional 4 percent bonds. The success of this reform mayor's financial program was proven in 1895 when conversion to the constitutional bonds left the city's debt standing at a little more than ten million dollars, an amount that, by that time, it was solvent enough to redeem.

Even so, the intervening years from 1882 to 1895 were characterized by continuous political strife. Besides the debt issue and a long tradition of corruption, much of this strife was engendered by the form of city government, one that lent itself to both inefficiency and splendid opportunities for graft. Since 1870 New Orleans had been governed under a charter whose carpetbag origins, according to one
student, made it "a point of honor with the regular Democrats to get
rid of it whether it be good or bad." Under its provisions, executive
and legislative authority was vested in one body made up of the
mayor and seven administrators, who headed such departments as
finance, improvements (public works), and waterworks and public
buildings. Inasmuch as the administrators were independent of the
mayor, his veto of a measure was little more than an expression of
personal disapproval. "This system had been deliberately devised by
the carpetbaggers," writes Joy Jackson, "and had served their pur­
poses well." Debt, the threat of disease, and Conservative Demo­
crats all called for reform, yet the city charter of 1882, which emerged
from a struggle between businessmen and professional politicians
(known over the years as the ring), fell short of the goal. Under its
provisions, executive control was lodged with a mayor and four com­
missioners, all popularly elected, while legislative power was vested
in a council of aldermen consisting of thirty members.

The new form of government soon proved to be a hindrance even
when the reformers were successful, as they were in 1888, since a
public-spirited mayor like Shakspere lacked clear-cut executive
power. Professional friends of the working class tended to dominate
commission seats throughout the period, and similar attributes on
the part of aldermen at the district level ensured ring control of the
city council. Corruption, fraud, and stolen elections were ordinarily
so common that they attracted little notice. Later recalling his neo­
phyte years in city politics, Martin Behrman, New Orleans's Progres­
sive Era city boss, remembered:

Every election in those days was a bitterly fought and very hot affair.
Of course, the ups and downs of politics will always cool some friend­
ships and increase some enmities, but the wildest campaigns we have
nowadays are very gentlemanly affairs compared to the average of the late
eighties. The voters were permitted to deposit any ticket they chose in the
ballot boxes and every faction printed its own tickets. I was myself the
head of a very suddenly organized faction in Algiers, that was not heard
of four days before the election of delegates to a city convention, and we
won. We printed our own tickets. In some parts of the city it happened
that a faction would be organized the night before an election and have its
tickets at the polls the next day.

Interestingly enough, the garbage issue was a major factor in the
collapse of ring rule in 1896 and in the adoption of a new charter that
provided for a form of government similar to that recommended by
the National Municipal Reform League. Among changes described
by Harper's Weekly as "more radical than would be the conversion of
Russia to a democracy" following the city election in April 1896 were charter provisions that established a civil service board, made two commission posts appointive, and reduced membership of the council to seventeen. These developments preceded the establishment of a new machine under city boss Mayor Martin Behrman in 1904, yet the despotism of the Progressive Era was of a different order than the ring rule of the Gilded Age. 27

In Memphis the government created by act of the legislature in the "revolution of '79," the Taxing District of Shelby County, was at one and the same time an instrument for fending off the city's voracious creditors and the vehicle for sanitary reform. As noted in Chapter 6, this commission form of government consisted of the three-man executive Board of Fire and Police Commissioners and the five-member Board of Public Works, both bodies constituting a legislative council. It was, essentially, government exclusively by the community's leading businessmen, and as such, it represented a sharp, clean break with the city's political past. "The oligarchy that came to power in 1879," contends Lynette B. Wrenn, "embraced nonpartisanship, as well as at-large elections, as a way of keeping the ward politicians who had dominated earlier city governments and their allies in county politics out of municipal affairs." 28 There was little or no pretense of representative democracy, and in the early years at least, at a time perceived to be one of imminent peril to the community, the steady, safe, and frugal character of the businessmen was reassuring to the battered city and provided a basis for public confidence in its program for recovery. During the first three years, under the leadership of Taxing District president David T. Porter, a prominent, wealthy merchant, the new government made public health, in the manner of sanitary reform, its first priority. 29

Succeeding Porter in 1882 as the Taxing District's executive officer was David Park Hadden, one of the most colorful and controversial figures in the history of Memphis politics. A native of Elkton, Kentucky, who had clerked, read law, and worked three years in a New York cotton office, Hadden came to Memphis in 1864 seeking his fortune—and found it. Adding to his success as a young factor and commission merchant, Hadden married advantageously, and in 1879 he was a partner in the Front Street firm of Farrington and Hadden and president of the Memphis Cotton Exchange. Between 1882 and 1888 "Pappy" Hadden, as he was familiarly known, carried forward the Taxing District's frugal civic improvement programs, provided daily entertainment for city hall loungers in his humorous conduct of the police court, and, most important of all, effected settlement of the
city debt. But by 1885 there were rumblings of protest against “one-man government” and lower-echelon corruption, and in 1887 Hadden was indicted by a packed grand jury on a long list of charges, some of which were trumped up and some not. Eventually, the charges against him were dropped. But by 1888 there was a growing consensus among business leaders that the Taxing District had seen its day. The behavior of the businessmen’s advisory committee during the yellow fever scare in September of that year indicated the shape of things to come. A new community prosperity called for expansion and spending, and so Hadden’s personal style of hands-on government came to be regarded as an enemy of progress with a propensity toward corruption and despotism.

This was not the whole of it, however. Hadden had successfully courted the black vote and had supported Lymus Wallace, a black cotton drayman and member of the Board of Public Works. The black policemen appointed during the yellow fever emergency in 1878 had been retained. By the late 1880s a rising tide of white supremacy swept across the urban South, and in Memphis voices that called for restoration of home rule were joined by others who called upon the regular Democratic party to purify politics of black defilement. “The changing of the guard,” according to Wrenn, “took place on January 16, 1890, following an election so passionate that ‘brother turned against brother and the very best of friends did not speak as they passed by.’” Bitterly dividing the city, the race issue brought about the removal of blacks from government posts and the police department and culminated in a brutal mob lynching of three black grocers in 1892. Finally, lobbyists for the “reform” sentiment that had been gathering since the mid-1880s achieved a partial restoration of home rule in 1893, thereby substituting new faces for old ones at city hall, yet essentially preserving the status quo of business control.

In Atlanta, city politics reflected the struggle between rival groups within Georgia’s Democratic party organization after 1879, a struggle in which the use of conventional labels such as redeemers, conservatives, and progressives tends to obscure rather than clarify what transpired. Most successful candidates for public office were businessmen who wore a regular Democrat label, and what they invariably stood for was rectitude in office and sound management of city affairs. An administration’s record depended in part on the character and talent of the men who served it, but it was determined even more by the extent to which it was identified with conditions favorable to business and by the skill with which it managed municipal finances.
Every mayor and council sought to meet the growing demand for city services by enlarging revenues without increasing either the debt or property taxes. Between 1879 and 1888 the various administrations succeeded in reducing interest payments by a series of funding and refunding schemes without significantly lowering the city debt. Much political mileage was made on the interest savings, but these did not begin to fill the widening gap between the city's service requirements and a property tax rate of 1.5 percent, one-fourth of the revenue from which was committed by an amendment to the city charter in 1879 to reduction of debt principal. While serving as chairman of the council Committee on Finance in 1878, James W. English succeeded in increasing personalty tax assessments by more than one million dollars. But during his administration as mayor in 1881-82, the attempt to fund public works through special rather than general tax programs met with taxpayer resistance.

Disclosures of corruption further undermined confidence in the city government, and in 1883 the Journal, noting the formation of the Law and Order League in St. Louis and the Committee of One Hundred in Philadelphia, asked: "What shall Atlanta do?" The question was directed to the administration of English's successor, Mayor John B. Goodwin, who sought unsuccessfully to placate irate businessmen by proposing to reduce the tax rate from 1.5 to 1.33 percent and by sponsoring an amendment to the city charter in 1884 that prohibited the mayor and council from contracting any debts whatsoever.

By comparison with those of his predecessors, the administration of Mayor George Hillyer was a model of public rectitude and fiscal probity, the style of political capitalism so ardently espoused by such diverse personalities as Henry W. Grady, Rufus B. Bullock, and Joseph E. Brown. Yet during the Hillyer administration, the battleground of city politics shifted to prohibition, and it was behind the barroom issue that rival groups contested for power until 1888. The growing strength of the prohibition movement in Georgia resulted in passage by the legislature of a statewide local option law on August 6, 1885, whereby 10 percent of the registered voters of a county might petition for a referendum, to be held separate from any other election, on the sale of liquor.

After nearly four months of hard-fought debate, accompanied by urgent courting of the black vote and some violence on the part of both sides, the referendum was held on November 25, 1885. As a result, Fulton County voted dry by the slim majority of 225 out of 7,000 votes cast, and as the Constitution predicted, the black vote decided the issue. Prohibition went into effect on July 1, 1886, and in his
valedictory address at the end of the year Hillyer asked: "Is there any other city where they have barrooms that has a surplus of over $225,000 in the treasury, on a clean balance sheet, at the end of the year, and can sell 4 ½ per cent bonds at par? I found the city with nearly one hundred and thirty barrooms. I leave it with none." 37

As it turned out, this early version of the noble experiment in Atlanta was short-lived. Hoping to prevent a split in the Democratic party, Grady through personal diplomacy was able to persuade leading "prohi's" and "anti's" to support a fusion ticket headed by lawyer John Tyler Cooper in the city election in 1886. The entire ticket was elected, but the result was to return a prohibitionist majority to the city council. In the meantime antiprohibitionist labor forces created a political organization called the Mutual Aid Brotherhood, an arm of the Knights of Labor referred to in the press as the M.A.B.'s, which began working to drum up support for another referendum. When the prohibitionist Board of Police Commissioners proceeded to purge the police force of M.A.B.'s late in March 1887, the *Journal* responded with an editorial on April 1 entitled "Where Is the Spirit of Conservatism?" 38

During that fall the prohibitionists and the "wets" waged all-out campaigns. As before, the *Constitution* remained neutral on the issue, yet this time Grady himself openly worked and spoke for the prohibition cause. Aaron Haas, a respected Jewish businessman and member of the board of health, was a leader of the "wets," who had the support of Hoke Smith and the *Journal*. 39 Intimidation and violence were resorted to by both sides in a struggle for the all-important black vote, but the superior financial resources and organization of the antiprohibitionists proved decisive. As a result of the second referendum on November 26, 1887, the "wets" not only carried the issue in Fulton County by a majority of 1,122 out of 9,244 votes cast, but they also won in every district in the city, gaining their largest majority in the heavily black fourth ward. In the city council election the following month, an antiprohibition Citizens' ticket carried the field, but this was the last Atlanta city election of the nineteenth century in which either the issue of prohibition or the black vote figured prominently. 40

On September 30, 1888, the *Constitution* commented editorially on the upcoming mayoral race and urged its readers to consider the proposition that "the governing of this city is a business." Like a business, the city government needed "men of broad gauge, of the best training, of careful business habits. . . . Therefore in voting for your officers," the newspaper counseled, "vote precisely as you would vote if you were selecting men to manage your own business instead
of that of the city.” Following the election of the regular conservative Peachtree ticket headed by the wealthy attorney John T. Glenn, outgoing mayor John Tyler Cooper congratulated the city on the restoration of white Democratic solidarity. “The talismanic word ‘Atlanta,’ ” he said, “has been the central point where all could unite, and the spirit of old has been revivified.”

The real basis of unity, however, was a shared and concerted determination to eliminate blacks from city politics, and in 1890 the regular city ticket was nominated by a white primary. In retrospect, the racial aspect of politics in both Memphis and Atlanta during the 1880s seems to have been a rehearsal for the broader state and regional conflicts of the 1890s. It would also appear that reunited rural Populists and Democrats, in embracing disfranchisement as a solution to the problem of blacks in southern politics, may have taken their cue from city folks.

But the city folks, for the most part, had been country folks to begin with. Except for Memphis, which temporarily suffered a sharp loss of population following the devastating epidemics of 1878–79, the three cities underwent significant growth from the end of the war down to 1900 mainly as the result of rural migration. Though it was the largest city in the South in 1900, New Orleans had an average rate of growth per decade for the period 1870–1900 that was only slightly more than 14 percent, while that for the United States as a whole exceeded 25 percent. New Orleans steadily declined in rank among the nation’s urban centers. The principal causes of this relative decline were twofold: as in the period prior to 1860, there was no appreciable natural increase, since the death rate now and then exceeded the birth rate at least until 1890, and after 1870 immigration from abroad slowed to a bare trickle. Aside from a sprinkling of Italians and Sicilians, who came during the 1880s and 1890s, immigrants simply did not come in significant numbers, despite all the energetic promotion of newspapers, businessmen, and immigration associations. Consequently, the number of foreign-born in the city declined. According to one student, between 1880 and 1900, those of German origin decreased from 13,944 to 8,733, and the number of Irish fell from 13,970 to 5,398. While the number of Italians increased during the same period from 1,995 to 5,398, the overall total of foreign-born fell to the extent that in 1900 they constituted only 10.6 percent of the city’s population.

Therefore, New Orleans’s growth after 1880, and that of Memphis and Atlanta as well, drew heavily upon the migration of native-born people from the rural South. Prior to 1900, however, in the Crescent
Table 2. Populations of New Orleans, Memphis, and Atlanta, 1870–1900

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<th>Year</th>
<th>White</th>
<th>Black</th>
<th>Native</th>
<th>Foreign</th>
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<tr>
<td><strong>New Orleans</strong></td>
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<td>1870</td>
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<td>77,714</td>
<td>256,779</td>
<td>30,325</td>
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<td>1870</td>
<td>24,755</td>
<td>15,471</td>
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</tr>
<tr>
<td><strong>Atlanta</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1870</td>
<td>11,860</td>
<td>9,929</td>
<td>20,699</td>
<td>1,090</td>
<td>21,789</td>
</tr>
<tr>
<td>1880</td>
<td>21,079</td>
<td>16,330</td>
<td>35,993</td>
<td>1,416</td>
<td>37,409</td>
</tr>
<tr>
<td>1890</td>
<td>37,416</td>
<td>28,117</td>
<td>63,662</td>
<td>1,871</td>
<td>65,533</td>
</tr>
<tr>
<td>1900</td>
<td>54,090</td>
<td>35,727</td>
<td>87,341</td>
<td>2,531</td>
<td>89,872*</td>
</tr>
</tbody>
</table>


* Includes persons classified as “other.”

City, unlike the two other cities, blacks constituted but little more than 25 percent of the total population. The other 75 percent came increasingly to be made up of whites who had abandoned southern farms. Thus, the social makeup of New Orleans in the Gilded Age differed greatly from that in the antebellum period. Although rural values contributed a dimension to social conflict different from that of an earlier day, the growing numbers of native-born contributed to an ever-increasing degree of cultural homogeneity after 1880. In fact, the change in the city’s attitude toward yellow fever between 1878 and 1897—a change from passive acquiescence to outright fear—is an indication of the transition. Formerly the “strangers’ disease,” yellow fever became a concern of the whole community.
Still, certain cultural attributes, together with social and economic factors, retarded the trend toward homogeneity (New Orleans retained a genuine, albeit diminishing, cosmopolitan tone well into the twentieth century), and these together with social conflict and ill health were characteristic of historical continuity in the city's life. Occupancy continued to follow the basic ecological pattern established in the 1820s, a pattern that was relatively unchanged until the Great Depression, when swamps finally succumbed to effective drainage. The Creole segment mostly clung to the Old Quarter east of Canal Street and north along Esplanade Ridge. The older immigrants competed for higher ground further east along the river with the newly arrived Italians, many of whom also settled in portions of the French Quarter abandoned by the Creoles.

As the more affluent native white Americans moved west into the Garden District and their Creole counterparts expanded north along the ridge, the poorer members of these native groups, along with incoming rural whites, were left to fight the bitter battles of assimilation in the Irish Channel and the French Quarter. Charles Dudley Warner noted in 1885 that "the African pervades all parts of the town, except the new residence portion of the American quarter." 44

In this way, New Orleans's ties with the past were most conspicuous. The old Creole-American conflict no longer affected business and politics, but smoldering antipathies continued to taint social relations. Racial and ethnic antagonisms, rooted mainly in economic competition, also held over from the old days. By the 1890s, however, the Germans and Irish had achieved a high degree of assimilation among native whites, although the poorer denizens of the Irish Channel still remained beyond the pale. The Italians, on the other hand, became objects of intense prejudice; a young Tulane student observed in 1904 that "the hatred of the native white worker for the Italian is intense, and is only exceeded by his antipathy to the Negro." 45

Although relations between white and black in New Orleans were and are like those in no other place in the South, the lowly condition of city blacks in the 1880s clearly signified their degradation. This was a result of the fact, as the novelist and social critic George Washington Cable pointed out on numerous occasions, that emancipation had merely meant the same freedom without rights that had characterized the lives of free blacks during slavery. Commenting on the labor scene in 1879, the Daily Picayune no doubt spoke for many New Orleanians by stating, "We want labor—but not the labor of the black man." 46 There were, of course, a few individuals such as Dr. Joseph
Holt, president of the state board of health and one of the few who attempted to serve as mentors to the city's moral conscience, who, like Cable, was "utterly wearied of the course pursued by our people of the South in their devoted following of a lot of narrow-minded, selfish politicians who lead them from one ditch to blunder into another." But the great majority of citizens would have agreed with the *Daily Picayune*'s pronouncement in 1885 that "if race feeling is nothing but a prejudice it will pass away in time." An astute city observer expressed the view that "one needs to be very much an optimist, however, to have patience for these developments."47

In Memphis and Atlanta, where developments were distinctly different from those in New Orleans, population trends that began in the immediate postwar period were accelerated after 1880. In the census of that year Memphis showed a net loss of close to seven thousand from the previous decade, or almost 17 percent, the result of death and flight from yellow fever in 1878-79. By contrast, during the same period, Atlanta's population spurted ahead by 72 percent. But in 1890 the two cities were neck and neck, Memphis rebounding from disaster with a 92 percent increase and prosperous Atlanta surging forward by 75 percent. At the turn of the century Memphis was the second largest city in the South behind New Orleans, posting nearly a 60 percent growth over 1890, mainly through annexation, while Atlanta rose from fourth to third during that decade with an increase of 37 percent over the previous enumeration.

But there were other significant changes as well. In 1870 nearly 17 percent of Memphis's population, mostly German and Irish, was foreign-born. The census of 1880 showed a reduction in their number from 6,780 to 3,971, the decline of over 41 percent representing the city's great, never to be replaced, cultural loss to yellow fever.48 By 1890 the proportion of foreign-born had fallen further to slightly over 8 percent, and by 1900 to 5 percent.49 Never a substantial part of Atlanta's makeup, its foreign-born element steadily declined from 5 percent in 1870 to less than 3 percent in 1900.

Blacks, by contrast, who together with rural whites served as surrogate immigrants, continued to migrate to both cities in ever-increasing numbers.50 In 1870 freedmen and former free blacks constituted over 45 percent of Atlanta's population, a proportion that declined slightly to almost 40 percent at the turn of the century. Their rate of growth, however, averaged 68 percent per decade between 1870 and 1890 but fell sharply to 27 percent during the closing decade of the century. In Memphis the census of 1880 showed nearly a 4 percent loss of black population from the previous count (most of these people died from yellow fever in 1878 and 1879), but still blacks made
up over 44 percent of the battered city's total inhabitants. Growth of the Bluff City's black population rebounded spectacularly during the next twenty years, increasing at an average rate of more than 83 percent per decade. "About half of Memphis' population in 1900 was black," notes Robert A. Sigafoos, "and it was the greatest percentage of black population of the 38 cities with more than 100,000 population." 

The torrential influx of rural blacks and whites into cities with limited economic capacity to house and employ them ensured that living and working conditions for many would be brutal and sickly and that racial enmity would constitute a social tinderbox ready to ignite at the slightest spark. Moreover, the available surplus labor depressed already low wages severely. In New Orleans, between 1883 and 1888, the average daily wage fell from $1.50 to $1.00, and while men earned an average of $10.00 per week, women and children were fortunate to earn $5.00. Commenting on extensive city unemployment on November 1, 1884, the Atlanta Journal observed that "it is no unusual thing at this season of the year for scores of young men from the country to flock into the city in search of employment, and numbers from the surrounding towns have been here on this mission within the past few days. One succeeds, but the ninety and nine fail and return home discouraged. . . . As a rule young men who are able to gain a competency in the country had best remain there." Over half of the five thousand or more people arrested annually in Memphis were listed as laborers, and although the majority of those detained were white, far more blacks than whites were remanded to the workhouse, jail, or prison. On one occasion the Constitution spoke volumes on the sociology of black people in all three cities when it asserted that "the puzzle which haunts the average Atlanta nigger's mind is how to live on twenty-five cents a week without paying the city $10 and costs—in work." 

The conditions of life in the three cities were, therefore, the chief determinants of the health of their inhabitants. Following the establishment of permanent boards of health in Memphis and Atlanta, regular annual mortality reports became available for all three, and table 3 shows death rates per thousand of population for the 1880s. In New Orleans and Memphis, where vigorous sanitary efforts were made by a voluntary citizens group and the municipal government respectively, the annual mortality rate held an importance on a level with the city's commercial and credit ratings, and there was much anxiety and concern that the sacrificial health reforms be vindicated by a good report. The annual report of the board of health in all three cities invariably occasioned either favorable or unfavorable comments.
Table 3. Mortality Rates for New Orleans, Memphis, and Atlanta, 1880–1889 (in deaths per thousand of population)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Orleans</th>
<th></th>
<th>Memphis</th>
<th></th>
<th>Atlanta</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>Total</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>1880</td>
<td>22.9</td>
<td>34.3</td>
<td>26.0</td>
<td>25.1</td>
<td>31.9</td>
</tr>
<tr>
<td>1881</td>
<td>25.7</td>
<td>38.9</td>
<td>29.3</td>
<td>32.4</td>
<td>49.0</td>
</tr>
<tr>
<td>1882</td>
<td>21.8</td>
<td>39.0</td>
<td>26.4</td>
<td>18.9</td>
<td>39.4</td>
</tr>
<tr>
<td>1883</td>
<td>27.5</td>
<td>49.0</td>
<td>33.3</td>
<td>25.5</td>
<td>41.3</td>
</tr>
<tr>
<td>1884</td>
<td>26.2</td>
<td>45.5</td>
<td>31.4</td>
<td>29.6</td>
<td>44.8</td>
</tr>
<tr>
<td>1885</td>
<td>25.2</td>
<td>37.2</td>
<td>28.5</td>
<td>24.4</td>
<td>37.4</td>
</tr>
<tr>
<td>1886</td>
<td>23.5</td>
<td>34.0</td>
<td>26.4</td>
<td>23.3</td>
<td>32.2</td>
</tr>
<tr>
<td>1887</td>
<td>22.3</td>
<td>32.1</td>
<td>25.0</td>
<td>21.9</td>
<td>32.3</td>
</tr>
<tr>
<td>1888</td>
<td>22.9</td>
<td>32.0</td>
<td>25.4</td>
<td>23.0</td>
<td>30.5</td>
</tr>
<tr>
<td>1889</td>
<td>21.2</td>
<td>30.9</td>
<td>23.9</td>
<td>19.3</td>
<td>24.3</td>
</tr>
</tbody>
</table>


in the newspapers and in the local medical press. But in Atlanta health matters never occupied the place in the public consciousness that they achieved in New Orleans and Memphis, so thoroughly ingrained was the myth of local vitality. There the burden of care about the city’s very real health deficiencies was borne almost entirely by the small municipal board of health, which did the best it could under circumstances that assigned its responsibilities and concerns a low position among community priorities.

Death rates in New Orleans and Memphis during the 1880s, as shown in table 3, averaged 27.6 and 29.7 per thousand, respectively. The racial discrepancy was enormous, however: in New Orleans the average annual white death rate of 23.9 compared with 37.3 for blacks reveals an excess black mortality of 56 percent; the comparable figures for Memphis are 24.3 and 36.3, with a black excess of 49 percent. In healthier Atlanta the overall average annual death rate for the decade was 20.2 per thousand, which compares favorably with the rates for
both New Orleans and Memphis. But there also the racial discrepancy was truly horrendous: while average annual white mortality was 13.8, that for blacks was 30.7, an excess black mortality of more than 120 per cent. Not until the Progressive Era would Atlanta's white elite act upon the realization that excessive sickness and death among blacks threatened the welfare of the entire community.54

The principal causes of death in all three cities were respiratory diseases, particularly pneumonia and "consumption," malarial fevers, meningitis, diarrheas, dysentery, typhoid fever, and the childhood diseases of diphtheria, whooping cough, and scarlet fever. Epidemics of smallpox occurred in all three cities in 1883 and 1884, and here again the excess of black morbidity and mortality were all too apparent. In 1884 an official of the Hartford Life and Annuity Insurance Company attributed company losses in west Tennessee to "the specially excessive mortality of the Memphis District."55 Worst of all was the infant mortality, expressed in deaths of children under one year of age per thousand live births, caused chiefly by "cholera infantum" and the childhood infectious diseases. In New Orleans, for example, for the year ending June 1, 1890, while white infant mortality was 339.93, the black infant death rate was 482.17, an excess mortality rate for black babies of nearly 42 percent.56

It is unlikely that the sanitary measures adopted in New Orleans and Memphis had much if any effect on their death rates during the 1880s; both cities finished the decade with death rates only somewhat lower than those in 1880. But in Atlanta, where sanitary efforts were minimal, the overall death rate at the end of the decade was slightly elevated over that of the beginning. A comparison of death rates in the three cities with five other American cities for the five-year period 1880–84, including New York at 27.8, Baltimore at 25.0, Boston at 22.7, Chicago at 21.8, and St. Louis at 20.6, indicates that health conditions were worst in Memphis, roughly the same in New York and New Orleans, and approximately equal in St. Louis and Atlanta.57 Yet the evidence also showed, according to a New Orleans physician and sanitarian, "the vast extent to which a healthy community is essentially stronger than one less healthy; . . . why 'public health is public wealth'; and . . . [thus furnishing] abundant reason for a crusade in favor of public health, one more enthusiastic and self-sacrificing than was waged to take Jerusalem."58

That a continuing need existed for a public health crusade in New Orleans is borne out by a comparison of city mortality rates with those of Memphis and Atlanta during the period 1890–95. The overall death rates for the Crescent City during the six-year period showed
Table 4. Mortality Rates for New Orleans, Memphis, and Atlanta, 1890–1895 (in deaths per thousand population)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Orleans</th>
<th></th>
<th></th>
<th>Memphis</th>
<th></th>
<th></th>
<th>Atlanta</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>Total</td>
<td>White</td>
<td>Black</td>
<td>Total</td>
<td>White</td>
<td>Black</td>
<td>Total</td>
</tr>
<tr>
<td>1890</td>
<td>24.9</td>
<td>37.8</td>
<td>28.5</td>
<td>17.8</td>
<td>24.5</td>
<td>20.8</td>
<td>15.7</td>
<td>36.2</td>
<td>23.0</td>
</tr>
<tr>
<td>1891</td>
<td>24.0</td>
<td>35.0</td>
<td>27.0</td>
<td>19.0</td>
<td>26.5</td>
<td>22.5</td>
<td>15.2</td>
<td>34.5</td>
<td>22.2</td>
</tr>
<tr>
<td>1892</td>
<td>25.7</td>
<td>39.6</td>
<td>29.5</td>
<td>17.8</td>
<td>24.3</td>
<td>21.8</td>
<td>13.8</td>
<td>30.7</td>
<td>20.1</td>
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<tr>
<td>1893</td>
<td>24.4</td>
<td>38.2</td>
<td>28.2</td>
<td>15.1</td>
<td>23.5</td>
<td>18.9</td>
<td>14.8</td>
<td>33.5</td>
<td>20.8</td>
</tr>
<tr>
<td>1894</td>
<td>21.9</td>
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<td>24.9</td>
<td>15.5</td>
<td>24.6</td>
<td>19.7</td>
<td>11.5</td>
<td>23.7</td>
<td>16.3</td>
</tr>
<tr>
<td>1895</td>
<td>25.4</td>
<td>38.7</td>
<td>29.2</td>
<td>19.6</td>
<td>25.4</td>
<td>22.3</td>
<td>11.8</td>
<td>23.9</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Sources: Biennial Report of the Louisiana State Board of Health to the General Assembly of the State of Louisiana, 1898–1899 (Baton Rouge, 1900), 153; "Deaths and Death Rates for All Causes," typewritten manuscript, Records of the Memphis and Shelby County Health Department, Memphis, Tenn.; Annual Report of the Board of Health of the City of Atlanta, 1895 (Atlanta, 1896), 346. Annual Report of the Officers of the City of Atlanta . . . 1894 (Atlanta, 1895), 347; 1895, 336.

no significant change from those of the 1880s, and black mortality continued to exceed white by more than 50 percent. The same was true for Atlanta; the first half of the 1890s showed virtually no change, although typhoid continued to take a tremendous toll among blacks.\(^{59}\) But in Memphis average annual overall mortality declined almost 30 percent over that in the 1880s. During the period 1890–95 the death rate among whites fell by 28 percent over that of the previous decade, and that among blacks fell by nearly 32 percent. The excess of black mortality over white also dropped by nearly 8 percent, but even so it remained high at 42 percent. It is difficult to avoid the conclusion, however, that the substantial decline in Memphis's mortality—given the absence of significant improvements in housing and working conditions—was at least partly attributable to the hygienic measures of the 1880s, especially to improvement in the municipal water supply.\(^{60}\)

The standard qualification of the cities' mortality reports over the years was the plea that a better showing could be made were it not for their black populations and that, in all fairness, comparisons should not be made with cities having few or no black people. "There is always a very high death rate among colored people," allowed the report of the New Orleans Board of Health in 1899, "because of their recklessness and improvident ways of living, and because of their
utter disregard of sanitary precautions. To make a just comparison with Northern and Western cities, where there is no negro population to speak of, it is manifestly but fair to include only the white population."

The second Conference for the Study of Problems Concerning Negro City Life, sponsored by Atlanta University, reported in 1897 that excessive black mortality in five southern cities was highest in Charleston, Atlanta, and Richmond, in that order, and lowest in Baltimore and Memphis. It was also reported "that the principal causes of the excessive mortality among the colored people of [those] . . . cities are pulmonary diseases and infant mortality." The study concluded that while black mortality exceeded white in the five cities by an average of 73.8 percent over a fifteen-year period, the years 1890–95 showed a definite improvement.

"During the final thirty-five years of the nineteenth century," writes Dana F. White, "Americans were trying to learn how to live in cities, a mode of existence that, as one turn-of-the-century urbanist noted, had not been 'a very easy art to master.' " First and foremost among their obstacles stood environmental pollution and the disease and mortality believed to be attributable to it. Pointing to ubiquitous "'filth' of various kinds" as the underlying cause of Boston's death rate of 31.8 per thousand of population in 1872, a committee of physicians appointed to investigate the city's sanitary condition also claimed as a mitigating factor that "Boston contains a large proportion of foreign inhabitants, of whom the greater number belong to a race [Irish] known to present exceptionally high death-rates, and . . . due allowances must be made for this special factor of insanitary condition."

Racial and ethnic prejudice aside, the 1880s ushered in a new era of sanitary consciousness. "The health of cities," began a New York national weekly newspaper article in 1884, "is a subject that grows in interest every year. We have at last caught the idea that diseases may be prevented, and that sickness is often only a proof of the want of common-sense, and hence in all great cities there is a constant labor to provide for sanitary reform." While confessing that New York's death rate was still excessive, the writer clearly grasped the utilitarian principle that was the heritage of American sanitarians in the Gilded Age:

It is to the working classes, the industrious and thriving, that this neglect of sanitary precautions comes with the most painful results. Disease and death rule in the crowded neighborhoods. But it is from thence that they
are borne to the homes of the wealthy, and thus the carelessness of the civic authorities brings grief and disaster to all classes alike. It is the interest of all to unite in demanding from the city officials new and almost undivided attention to the health of the people. Here we have an aim worthy of the labors of all; a party pledged to such an object would be certain to obtain a general support. Every parent and every honest man would vote for the candidate who promised health and life to the family and home.67

In his study of Newark, designated by the census of 1890 as the nation’s unhealthiest city, public health historian Stuart Galishoff concludes that the responses to urban disease and sanitary problems were essentially the same throughout the nation. Judith Walzer Leavitt’s finding from her study of late nineteenth-century Milwaukee that “political factors equalled the economic ones as major determinants of the course of health reform” is amply affirmed by developments in New Orleans, Memphis, and Atlanta.68 Public works corruption in the southern cities, on the other hand, was more than matched in the District of Columbia, where a five-million-dollar bond issue was squandered by contractors who built lateral sewers on an uphill grade. Despite comparable obstacles, Chicago also posted gains in the struggle against disease.69

In his recent book The Sanitarians: A History of American Public Health, John Duffy contends that “the last twenty years of the nineteenth century saw the sanitary revolution in full swing.”70 From the standpoint of business advantage resulting from reduced mortality and increased life expectancy, the investment proved to be a profitable one.71 Duffy also notes the great importance of regional differences and variations, factors that distinguished health problems in the South from those of other sections of the nation. In the southern region, as Margaret Ellen Warner has shown, public health policy was definitely shaped by yellow fever. “Certainly,” she writes, “the fact that the 1878 epidemic was more costly and widespread than any previous yellow fever visitation gave a powerful impulse to public health reform.”72

As the principal sufferers during the epidemic of 1878, Memphis and New Orleans were at the forefront of the southern public health movement, and their accomplishments received both national and international recognition. In 1881 Edwin Chadwick, the father of the English public health movement, hailed the construction of the Memphis sewer system as “the first instance . . . of the drainage of a town in the States, on . . . correct principles.”73 All things considered, David R. Goldfield’s assertions that “the southern city and region ac-
tually moved backward in the half century following the Civil War" and that "there was no real advancement relative to the rest of the nation" seem somehow off the mark. 74

Without a doubt the strides toward public health in New Orleans and Memphis would not have been possible had there been a recurrence of yellow fever epidemics following the disaster of 1878. But for nearly two decades, although there were isolated cases in the Crescent City almost every year, epidemic yellow fever did not return to the two cities until 1897, and then the outbreaks were quite limited. 75 The last appearance of yellow fever in an American city occurred in New Orleans in 1905, and then the epidemic was quashed by the isolation of infected persons, screening of water cisterns, and other antimosquito measures. 76 Why then, a young physician-historian has asked,

...did yellow fever begin to disappear from New Orleans—long before the mosquito was discovered to be the transmitter of the disease in 1900? The vector population did not decrease, for the climate did not change and breeding sites continued to be abundant (man-mosquito contact also remained frequent). The number of susceptible people in the city did decrease, however, for post-Civil War immigration to New Orleans never equaled that of pre-war days, and the frequent onslaughts of yellow fever in the 1850's had left most of the surviving population immune. More importantly, less yellow fever was imported into New Orleans after 1880 (despite continued trade with the tropics), for the city's quarantine system improved and the disease began to decline in frequency at its principal Caribbean focus in Havana. Finally, the virus appears to have become less virulent as the 19th century progressed, so that by 1900, yellow fever was no longer taking the deadly toll that had earlier earned New Orleans the unenviable sobriquet "Necropolis of the South." 77

Thus the southern yellow fever epidemic of 1878 stands as a milestone in the urban history of the South and as a major historical landmark in the development of public health in both region and nation. 78

In a recent collection of essays edited by Todd L. Savitt and James Harvey Young, Disease and Distinctiveness in the American South, one contributor maintains that the advent of public health in the South came with applications of bacteriology following an upturn in the region's economy near the beginning of the twentieth century. 79 On the contrary, the movement began amid severe economic vicissitudes and at a time when the anticontagionist filth theory of disease causation still dominated the thinking of both medical professionals and
informed laymen. Its motivating force was an immediate, compelling imperative to cope with the destruction wrought by yellow fever, a mysterious and terrifying disease that presented a threat not just to southern towns and cities but to the nation’s welfare as a whole. The southern sanitarians who led the way in the 1880s eventually conferred the benefits of better health and greater life expectancy on those who came after them.
Notes

1. Beginnings of the Public Health Movement

6. Ibid., 55, quoted.
7. Ibid., 52–53, quoted.
8. Ibid., 17.
18. Quoted in Rosen, *History of Public Health*, 215. See also Pelling, *Cholera, Fever and English Medicine*, 32–33. Pelling writes: "But the option of attacking 'the most powerful and general' causes of disease, in the shape of drains, stagnant water, and accumulated organic filth, was clearly reasonable from
every point of view. It could be justified on traditional grounds as well as on the basis of more modern theories, and it had already been proved effective on a small scale. It was, as well, both preventive and economical of effort, and it was practicable: sanitary practice as opposed to sanitary administration was very much an art of the possible, it being obvious to all sectors of opinion that most causes of epidemic diseases, especially remote causes, were outside current knowledge or control.”


20. John Simon, *English Sanitary Institutions*, 2d ed. (London, 1897), 212–13. Other organizations included the Association for Promoting Cleanliness among the Poor, the Metropolitan Association for Improving the Dwellings of the Industrious Classes, and the Society for the Improvement of the Condition of the Labouring Classes.


33. "First Report of the Committee on Public Hygiene of the American Medical Association," in The First American Medical Association Reports on Public Hygiene in American Cities (1849; New York, 1977), 431-44. Dr. Griscom headed the committee of twelve physicians, which also included Drs. Edward Hall Barton and Erasmus Darwin Fenner of New Orleans. In its first report presented at the Boston meeting in 1849, the committee endorsed a safe and adequate water supply, cleansing of streets and removal of garbage, and effective drainage and sewerage as the essentials of disease prevention. The physicians agreed with Chadwick's view, stating, "It need hardly be said that educated engineers are the only persons competent to direct the execution of these important works."


35. Barbara Gutmann Rosenkrantz, Public Health and the State: Changing Views in Massachusetts, 1842-1936 (Cambridge, Mass., 1972), 14-22. See also Cassedy, American Medicine and Statistical Thinking, 203. Other states enacting early registration laws included New York, 1847; New Jersey and Connecticut, 1848; Rhode Island and New Hampshire, 1849; and, during the 1850s, Kentucky, Pennsylvania, South Carolina, Ohio, Vermont, and California. Most of these were ineffective, and not even that of Massachusetts, notes Cassedy, achieved the level of the English system.

36. Report of a General Plan for the Promotion of Public and Personal Health, Devised, Prepared and Recommended by the Commissioners Appointed Under a Resolve of the Legislature of Massachusetts, Relating to a Sanitary Survey of the State (Boston, 1850), 103, 276-77.


38. Duffy, Sanitarians, 84-85; Howard D. Kramer, "History of the Public Health Movement in the United States, 1850 to 1900" (Ph.D. diss., State University of Iowa, 1942), 64ff.


42. Duffy, Healers, 189-205.

43. Cassedy, American Medicine and Statistical Thinking, 208.


47. Quoted in Duffy, History of Public Health in New York City, 1625–1866, 553.

48. Ibid.


2. The Necropolis South


9. Williams’ *Atlanta Directory, City Guide, and Business Mirror, Contains Also a List of Post Offices, in the United States, Corrected Up to Date*, vol. 1, 1859–’60 (Atlanta, 1859), 12.


19. Edward Pessen, “The Egalitarian Myth and the American Social Reality: Wealth, Mobility, and Equality in the ‘Era of the Common Man,’ ” American Historical Review 76 (Oct. 1971): 1026. See also Frederick Law Olmsted, The Cotton Kingdom: A Traveller’s Observations on Cotton and Slavery in the American Slave States, 2d ed. (New York, 1862), 2:326. Olmsted observed that “the whole South is maintained in a frontier condition by the system [slavery] which is apologized for on the ground that it favours good breeding. This system, at the same time, tends to concentrate wealth in a few hands.”


32. Capers, *River Town*, 60, 244.

33. F.D. Thurman, "Healthfulness of Atlanta," *Atlanta Medical and Surgical Journal* 3 (July 1858): 650.


41. *Report of the Yellow Fever Among the Odd-Fellows of Memphis in 1873* (Memphis, 1874), 4. The physician was Dr. Robert W. Mitchell, who was subsequently a member of the National Board of Health.


44. Quoted in Capers, *River Town*, 108.


47. Quoted in Garrett, *Atlanta and Environs* 1:453; see also pp. 248–49.


52. Capers, River Town, 127–29, 181.

53. Taylor, Louisiana Reconstructed, 200. In 1872 Burke was declared the winner over General P.G.T. Beauregard in the municipal contest for the office of administrator of improvements before the votes were counted.


64. “Artesian Well, New Orleans, 1854,” two manuscript notebooks of an unnamed drilling contractor in Special Collections Division, Howard-Tilton Library, Tulane University; Barton, Cause and Prevention of Yellow Fever, 142; Memphis Weekly American Eagle, Nov. 7, 1845; “Editorial and Miscellaneous,” Southern Medical Record 3 (June 1873): 374; Thurman, “Healthfulness of Atlanta,” 650. Raleigh Spring near Memphis and Ponce de Leon Spring near Atlanta were popular resorts during the antebellum period.


67. Barton, Cause and Prevention of Yellow Fever, 12. See also K. David Patterson, "Disease Environments of the Antebellum South," in Ronald L. Numbers and Todd L. Savitt, eds., Science and Medicine in the Old South (Baton Rouge, 1989), 152–65, and Cowdrey, This Land, This South, 89. "Epidemic disease and early death told against cities already at a disadvantage," Cowdrey observes, "and helped to define their parochial future."

68. Old Folks Record 1 (Sept. 1875): 563–64.


73. Thurman, "Healthfulness of Atlanta," 650.


75. "Atlanta Academy of Medicine," Atlanta Medical and Surgical Journal 13 (July 1875): 226.

76. Leland A. Langridge, Jr., "History of Asiatic Cholera in Louisiana, 1832–1873" (M.A. thesis, Louisiana State University, 1955); S.R. Bruesch, "The Disasters and Epidemics of a River Town: Memphis, Tennessee,


The organizations took the name of John Howard, the famous eighteenth-century English hospital and prison reformer.


85. “Yellow Fever,” Atlanta Medical and Surgical Journal 4 (Oct. 1858): 121; Atlanta Constitution, Sept. 5, 1878; Ely McClellan, “A Study of the Yellow Fever Epidemic of 1876, as it Affected the State of Georgia,” American Public Health Association Reports 4 (1877–78): 249–85; Cooper, Official History of Fulton County, 212; Raymond B. Nixon, Henry W. Grady: Spokesman of the New South (New York, 1943), 109–10. From the earliest days Atlanta’s cotton receipts were negligible, and in 1872 they were less than fifteen thousand bales. Following the Brunswick and Savannah epidemics in 1876, Atlanta’s receipts for the year ending Sept. 1, 1877, were eighty-eight thousand bales. Then, in the following year, they exceeded one hundred thousand bales.


87. Chaillé, “Vital Statistics of New Orleans,” table 1, also pp. 8–10; Quarantine and Sanitary Operations of the Board of Health of the State of Louisiana, During 1880, 1881, 1882 and 1883, by Joseph Jones, M.D., President of the Board of Health of the State of Louisiana. Introduction to the Annual Report of the Board of Health to the General Assembly of the State of Louisiana, 1883–4 (Baton Rouge, 1884), [54]. The highly questionable data of the Jones document puts the average mortality for the years 1845, 1847, 1849, 1850, 1852, and 1853 at 66.1 per 1,000 of population.


90. Chaillé, “Vital Statistics of New Orleans,” table 1, also pp. 9–11, 20–21; Quarantine and Sanitary Operations of the Board of Health of the State of Louisiana, [54]; Hanleiter’s Atlanta City Directory, For 1871, 35; Taylor, “Atlanta

91. Memphis Daily Appeal, June 19, 1873.

92. See Latrobe, Impressions Respecting New Orleans, 146; Merrill, “Yellow Fever in Memphis,” 155–56; Edwards, Memoriam, 27.

93. Memphis Daily Appeal, Aug. 7, Sept. 17, 19, 1873; Memphis Daily Avalanche, Sept. 21, 1873. The health officer was J.H. Nuttall, M.D. See Toner, “Boards of Health,” 511. Dr. Toner reported that “in reply to my circular of inquiry the following note was appended for Memphis, just before the yellow fever pestilence [in 1873] began its ravages in that city:—‘ . . . It is a source of regret to Dr. E[rskine], and other physicians of standing in Memphis, that our city government cannot see the necessity for the establishment of a Board of Health.’ ”


96. Toner, “Boards of Health,” 504–5; Duffy, ed., History of Medicine in Louisiana 2:185–97, 459–66; James P. Baughman, Charles Morgan and the Development of Southern Transportation (Nashville, 1968), 142. As of 1872–73 the Louisiana State Board of Health consisted of nine members, the majority of whom were physicians, appointed by the governor of Louisiana and the New Orleans city council. There were four assistant health officers (sanitary inspectors), who, in turn, had twelve assistants. The offices of president and secretary of the board, both held by physicians, were salaried at two thousand dollars per year.


99. [William L. Robinson], *The Diary of a Samaritan. By a Member of the Howard Association of New Orleans* (New York, 1860), 19.

100. [Erasmus] Darwin Fenner, "The Yellow Fever Quarantine at New Orleans," in *First American Medical Association Reports on Public Hygiene in American Cities*, 624. See also Martha C. Mitchell, "Health and the Medical Profession in the Lower South, 1845–1860," *Journal of Southern History* 10 (Nov. 1944): 424–46; John Duffy, "A Note on Ante-Bellum Southern Nationalism and Medical Practice," *Journal of Southern History* 34 (May 1968): 266–76. Writing to James D. Wynne, M.D., chairman of the AMA Committee on Public Hygiene, on April 16, 1849, Dr. Fenner stated: "A difference of opinion has ever existed respecting the nature and origin of yellow fever at [New Orleans] and the neighbouring places where it has prevailed for a little more than a half a century past. Whilst some have contended that it is a specific disease, introduced from the West Indies into New Orleans towards the end of the last century, when Louisiana was a colony of Spain, others, comprising some of the ablest and most experienced observers, have been perfectly convinced that it is only one of the forms of endemic malarial fevers occurring at irregular intervals. One party contends that it may be spread or propagated by means of infection or contagion. At the same time, there is a third party which entertains some of the opinions belonging to both."


109. Cowdrey, *This Land, This South*, 83–89; James O. Breeden, “Disease as a Factor in Southern Distinctiveness,” in Savitt and Young, eds., *Disease and Distinctiveness*, 1–28. “Even during the first half of the nineteenth century,” notes Cowdrey, “the sickliness of the region relative to the rest of the country was often remarked.”

110. [Robinson], *Diary of a Samaritan*, 85.

111. Quoted in Capers, *River Town*, 189.


113. E[dward] H[all] Barton, *Report to the Louisiana State Medical Society, on the Meteorology, Vital Statistics and Hygiene of the State of Louisiana* (New Orleans, 1851), 22–23. Dr. Barton went on to say: “We hug our chains with delight and stone the man who will attempt to convince us that they are but the chains of sciolism and ignorance, forgetful at the same time that we but deceive ourselves.” For a defense of the myth of salubrity, see Bennet Dowler, *Researches upon the Necropolis of New Orleans, With Brief Allusions to its Vital Arithmetic* (New Orleans, 1850).

### 3. The Epidemic of 1878


7. Annual Report of the Board of Health of the State of Louisiana, 1878, 1–4, 49; Soards’ New Orleans Directories for 1877–1881 (New Orleans, 1877–81), n.p.; New Orleans Daily Picayune, Jan. 3, 1879; L’Abeille, July 28, Aug. 29, 30, 1878. The evidence indicates that Dr. Drew was known for his success in treating yellow fever cases and that Mrs. Marshall was experienced in nursing them. The Souder’s New Orleans shipping agent, however, later gave sworn testimony that Clark had yellow fever at Vera Cruz in 1875. Clark himself was alleged to have boasted after arriving in New Orleans that he had “beaten the quarantine doctor.”


10. Atlanta Constitution, April 18, 1878; see also March 21, 24, 1878.

11. Ibid., June 26, 1878.


15. New Orleans Daily Picayune, July 24, 1878. The Washington Post of July 20, 1878, carried a brief account of yellow fever cases aboard a ship arriving at the Brooklyn Navy Yard from Havana on June 13. According to the account, the ship had been fumigated, and three seamen were convalescing in the quarantine infirmary.


27. Ibid., Aug. 30, 1878.


29. [Henry] Ginder Papers, Folder 18, Special Collections Division, Howard-Tilton Library, Tulane University. See also New Orleans Daily Picayune, Aug. 17, 1878; Frank Leslie’s Illustrated Newspaper, Sept. 14, 1878; Report of the Howard Association of New Orleans, 16.


35. Thomas C. Porteous to Jules Levois, Sept. 3, 1878, Porteous Papers. In a letter of Sept. 10 Porteous reported the death of the salesman. See also Jones, "Yellow Fever Epidemic of 1878," 869.


42. Memphis *Daily Appeal*, Sept. 8, 1878. See also Sisters of St. Mary, 41, and John P. Dromgoole, *Yellow Fever Heroes, Heroines, and Horrors of 1878* (Louisville, Ky., 1879), 64.

43. Quoted in Robbins, "Alas, Memphis!" 39.


48. Quoted in Hicks, ed., Yellow Fever and the Board of Health, 30. See also Keating, History of the Yellow Fever, 365–76. It is virtually certain that there were instances of robbery and assault, although none can be documented.

49. Memphis Daily Appeal, Sept. 15, 1878. For different versions of both stories, see Keating, History of the Yellow Fever, 180, 184, and Dromgoole, Yellow Fever, 63.

50. Washington Post, Sept. 9, 1878, quoting Psalms 91:6. The appeal was signed by E. John Ellis, Louisiana; R.L. Gibson, Louisiana; John T. Morgan, Alabama; William H. McCardle, Mississippi; and Cyrus Bussey, president of the New Orleans Chamber of Commerce.

51. Memphis Daily Appeal, Sept. 27, 1878. See also reports of various committees and organizations in Keating, History of the Yellow Fever, 115 and throughout, and Report of the Central Relief Committee (Memphis, 1879), 41 and throughout.


56. Atlanta Constitution, Sept. 6, 1878; see also Sept. 4, 1878.

57. Ibid., Oct. 2, 1878.


60. Frank Leslie's Illustrated Newspaper, Oct. 26, 1878.


64. L'Abeille, Nov. 4, 1878; New Orleans Daily Picayune, Nov. 5, 7, 20, 1878. In both Memphis and New Orleans a number of refugees who returned prematurely were fatally stricken.
65. A Compilation of the Messages and Papers of the Presidents (New York, n.d.), 10:4444–45. See also Conclusions of the Board of Experts Authorized by Congress to Investigate the Yellow Fever Epidemic of 1878 (Washington, D.C., 1879), 4 and throughout. The Board of Experts put the monetary costs of the epidemic at between $150 million and $200 million.

67. Ibid., Aug. 17, 1878.

69. New Orleans Daily Picayune, Aug. 28, 1878. See also L'Abeille, Aug. 23, 1878.

70. "Calling Things by Their Right Names," New Orleans Medical and Surgical Journal, n.s., 6 (Nov. 1878): 415–16. See also Rauch, "Report on Quarantine at New Orleans," 461, and New Orleans Daily Picayune, Jan. 3, 1879. There were 412 more deaths reported from malarial fever in 1878 than in 1877. On Jan. 2, 1879, a well-known Creole physician, Dr. Francis Quijano, testified under oath: "I did not see a case of yellow fever in New Orleans."


77. Atlanta Constitution, Oct. 29, 1878.

4. The Quest for National Health Legislation

7. Atlanta Constitution, Aug. 27, 1878.
22. Ibid.
movement, Dr. Harris organized the volunteer United States Sanitary Commission during the Civil War.


27. New York Times, Nov. 20, 1878. See also Washington Post, Nov. 20, 23, 1878. The Post noted the presence of "a fair sprinkling of ladies"; it is most likely that Mrs. Thompson was among them. At the concluding session, the executive committee elected her a member of the association.


29. Ibid., Nov. 22, 1878.


31. “Yellow Fever Commission and the American Public Health Association,” 497–98. The report’s contagionist bias outraged anticontagionist sanitarians at the convention, and the report subsequently received scathing criticism in the medical press. Bemiss defended the commission’s motives but later admitted that the investigation had been hasty, shoddy, and generally lacking in scientific respectability.


33. Washington Post, Nov. 21, 1878. At the evening session of Nov. 20 the APHA executive committee presented the following resolution for adoption: "Resolved, that a committee be appointed by the president, to whom all resolutions and motions relating to proposed actions by the General Government of the United States shall be referred without debate, the committee to report to the executive committee, and consist of seven members."

34. “Yellow Fever Commission and the American Public Health Association,” 503. Dr. Bemiss noted that "there is a lack of cordiality on the part of some of the medical officers of the army towards the branch of service Dr. Woodworth controls. The army was well represented at Richmond."


36. Washington Post, Nov. 22, 1878. As medical and scientific adviser to President Daniel Coit Gilman of the new Johns Hopkins University, Billings was at the forefront of the new science of bacteriology, which shaped the direction of yellow fever research in the 1880s. See Wyndham D. Miles, "Prizes for Yellow Fever Research in the 1880’s," Bulletin of the History of Medicine 63
Notes to Pages 68–72


38. Washington Post, Nov. 23, 1878. See also Bruton, “National Board of Health,” 126–27, and Bess Furman, A Profile of the United States Public Health Service, 1798–1948 (Washington, D.C., 1973), 142. Dr. Joseph M. Toner was named secretary of the legislative executive committee, of which Billings was also a member.


41. Thomas C. Porteous to Jules Levois, Nov. 5, 1878, in Thomas C. Porteous Papers, Department of Archives and Manuscripts, Louisiana State University Library.


44. Ibid.

45. Ibid.


50. Frank Leslie’s Illustrated Newspaper, Aug. 24, 1878. A news item noted that “there are some signs of a Democratic revolt in some of the Southern states.” See Eric Foner, Reconstruction: America’s Unfinished Revolution, 1863–1877 (New York, 1988), 575–87, and Carl V. Harris, “Right Fork or Left Fork? The Section-Party Alignment of Southern Democrats in Congress, 1873–1897,” Journal of Southern History 42 (Nov. 1976): 471–506. Professor Harris suggests that “from 1873 to 1897 the congressional alignments of southern Democrats varied greatly from issue to issue, and so did their ability to win.”

52. Congressional Record, 45th Cong., 3d sess., vol. 8, pt. 1, pp. 44, 47–48. The members of the House committee were H. Casey Young (D., Tenn.); Randall L. Gibson (D., La.); John Goode (D., Va.); Julian Hartridge (D., Ga.); Charles Hooker (D., Miss.); Simeon B. Chittenden (R., N.Y.); James A. Garfield (R., Ohio); Leopold Morse (D., Mass.); and Alfred C. Harmer (R., Pa.). See Biographical Directory of the American Congress, 974, 1196, 1207, 1219–20, 1269, 1278, 1337, 1595, 2053.


55. “Yellow Fever Board of Experts,” Atlanta Medical and Surgical Journal 16 (Jan. 1879): 624. See also [John] G. Westmoreland, “Yellow Fever, Its Origin and Relation to Other Malarial Fevers,” Transactions of the Medical Association of Georgia, 1879 (Atlanta, 1879), 115. Dr. Westmoreland referred to the Yellow Fever Commission and the Board of Experts as “packed committees” and spoke disparagingly of their “cut and dried reports.”


59. Conclusions of the Board of Experts, 3.
60. Ibid., 8–36.
61. Senate Reports, 45th Cong., 3d sess., vol. 2, no. 734, pp. 3–4. Following receipt of the report, the Senate Select Committee on Epidemic Diseases adopted its recommendations. It was understood, however, that members of the Board of Experts were to provide detailed reports of their investigations for the use and guidance of the congressional committees.
62. S.R. 1462, Senate, 45th Cong., 3d sess.; Bruton, “National Board of Health,” 143–44. According to Bruton, the Lamar bill was actually drafted by Dr. Stephen Smith of New York with Woodworth’s approval.
63. Quoted in Bruton, “National Board of Health,” 145. At the time, Woodworth was a corresponding member of the Philadelphia Academy of Sciences. See Washington Post, March 15, 1879.
66. C. Vann Woodward, Origins of the New South, 1877–1913 (Baton Rouge, 1951), 34; Dictionary of American Biography, s.v. “Matthews, Stanley.” Elected to the Senate from Ohio in 1877 to fill the vacancy left by John Sherman’s appointment as secretary of the Treasury, Matthews was appointed to the U.S. Supreme Court in 1881. The political battle over his confirmation reflected the bitterly partisan party conflicts of the period.
68. Ibid., 929, 1043, 1072, 1484; Margaret Ellen Warner, “Public Health in the New South: Government, Medicine and Society in the Control of Yellow Fever” (Ph.D. diss, Harvard University, 1983), 83–86.
73. Ibid., pt. 3, p. 1862. The bill’s major aim was to encourage the development of state and local boards of health according to APHA guidelines. See Biographical Directory of the American Congress, 1537. Bruton states: “The McGowan plan was little more than the House version of the Withers proposal” (“National Board of Health,” 153).
75. Furman, Profile of the United States Public Health Service, 143–47. The note and memorandum in Billings's handwriting are reproduced from the Toner Manuscript Collection, Library of Congress.
76. Washington Post, March 3, 1879. According to the Post account, "Mr. Young's substitute, establishing a board of health to meet in Washington, was agreed to, and the question recurring on the passage of the Senate bill as amended, after a number of incidental motions, and through a misunderstanding, it was defeated 128 to 112. Mr. Young at the evening session succeeded in having the bill reconsidered, but after a series of votes and parliamentary skirmishes the bill was finally defeated by a vote of 118 to 60."
77. Ibid. According to the Post, "The intruder was then removed by one of the doorkeepers."
78. New York Times, March 5, 1879.
80. See Congressional Record, 46th Cong., 1st sess., vol. 9, pt. 1, p. 72. On March 26, 1879, Senator Harris introduced yet another joint resolution "requesting Drs. Bemiss, Cochran and engineer Hardie [sic] to complete their reports in the yellow fever epidemic of 1878 for the use of Congress."
81. Washington Post, March 15, 17, 1879. A brief editorial note in the Post of March 15 stated: "Dr. Woodworth killed himself by over-work, and yet we doubt if such 'laborers' as Cohen would have been willing to recognize him." I can offer no explanation of this cryptic statement. The obituary in the Post of March 15 read in part: "[Woodworth's] death, though not unexpected, was sudden, and its announcement will be received with surprise and sorrow by a very large circle of eminent gentlemen by whom he was known and honored. The first symptoms of disease appeared about the 5th of the present month, when the doctor was attacked with erysipelas in the head. This was followed by pneumonia, and, as a result, the not over-strong physique gave way, and nervous prostration and speedy death ensued." See also "Obituary. John Maynard Woodworth," New Orleans Medical and Surgical Journal, n.s., 7 (July 1879): 54–55, and Furman, Profile of the United States Public Health Service, 121–49, 463. Furman wrote: "Credit goes to Elizabeth Pritchard, speech writer for many Surgeons General, and Public Health Service historian, with whom the author talked many times on historical points. [It was] Mrs.
Pritchard's conviction that the first Surgeon General, Dr. John M. Woodworth, committed suicide."


84. Quoted in Furman, *Profile of the United States Public Health Service*, 149.

85. Paul Addis, "James Lawrence Cabell," in *Dictionary of American Medical Biography* 1:111. While the history of the National Board of Health is beyond the scope of this study, the subject has received excellent treatment in Bruton, "National Board of Health," and in Wyndham D. Miles, "A History of the National Board of Health, 1879–1893," History of Medicine Division, National Library of Medicine, Bethesda, Md.


88. Bruton, "National Board of Health," 156–63; *Statutes at Large of the United States*, vol. 21, chap. 11, pp. 5–7: "An act to prevent the introduction of contagious or infectious diseases into the United States." The quarantine act appropriated five hundred thousand dollars to the National Board of Health for carrying its provisions into effect.

89. Woodward, *Origins of the New South*, 58–65. According to Woodward, "provision for the care of state prisoners, the insane, the blind, and other dependents, as well as measures for safeguarding public health, were largely governed by the philosophy of retrenchment that guided the Redemption policy on public schools."


91. John Duffy, "The American Medical Profession and Public Health: From Support to Ambivalence," *Bulletin of the History of Medicine* 53 (Spring 1979): 4. In this presidential address to the American Association for the History of Medicine on May 11, 1978, in Kansas City, Mo., Professor Duffy noted: "Strange as it may seem in this day of massive federal involvement in all aspects of society, the issue of states' rights was still a major force in American history [during the 1870s], and the APHA consisted largely of state and municipal health officers, all of whom were jealous of their authority."

92. *Constitution of the United States*, Amendment 10: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."
5. The New Orleans Sanitary Association


6. Ibid.

7. Ibid., April 1, 1879; Address from the Auxiliary Sanitary Association, 15–16. As of June 1879 the NOASA had a membership of 215 individuals and firms, including leading New Orleans clergymen such as Hugh Miller Thompson, later Episcopal bishop of the diocese of Mississippi; the Reverend Benjamin Morgan Palmer, a former spiritual leader of the Confederacy and pastor of the First Presbyterian Church; and Rabbi James K. Gutheim, who served the city’s first Reformed Jewish congregation, Temple Sinai, organized in 1872. See Dictionary of American Biography, s.v. “Thompson, Hugh Miller” and “Palmer, Benjamin Morgan”; Julian B. Feibelman, A Social and Economic Study of the New Orleans Jewish Community (Philadelphia, 1941), 85–86; and James W. Silver, Confederate Morale and Church Propaganda (New York, 1967), 16ff.

8. New Orleans Daily Picayune, April 1, 1879; Soards’ New Orleans Directory for 1879 (New Orleans, 1879); Thomas Sloo Papers, Folder 2, Department of Archives and Manuscripts, Louisiana State University. See also James P. Baughman, Charles Morgan and the Development of Southern Transportation (Nashville, 1968); Arlin Turner, George W. Cable, A Biography (Durham, N.C., 1956), 92; and Paul M. Gaston, The New South Creed: A Study in Southern Myth-making (New York, 1970), 28. Cable’s model for Honoré Grandissime, the liberal Creole merchant in his novel The Grandissimes, was Adolphe Schreiber. According to Gaston, Burwell was committed to “oppose sectionalism, advocate protection of Negro rights, encourage programs to entice labor and capital into the region, and impress upon all Southerners their ‘paramount duty’ to work ‘silently, resolutely, honorably for the social and industrial reconstruction of the South.’”


waste collection replaced by sewerage technology in American cities in the late nineteenth and early twentieth centuries was the privy vault–cesspool system. The privy vault and cesspool were essentially holes in the ground, often lined with stone, located close by residences or even in cellars. Although a good part of the contents of a well-constructed cesspool or privy was often absorbed by surrounding soil, the receptacles still needed periodic emptying. In some cities the contents of the vaults or cesspools were removed by scavengers or farmers, often under contract to the municipality. In many locales, however, householders merely covered the full vaults with dirt and dug new receptacles. The privy vault–cesspool system, therefore, had the following characteristics: it was locally based, removal was inefficient and labor intensive, and the system was largely privately maintained.”

28. Ibid., June 17, Dec. 15, 1880. The three ASA officers were General Cyrus Bussey, Albert Baldwin, and William B. Schmidt.


38. See, for example, New Orleans Daily Picayune, Jan. 11, Nov. 18, 1881, March 30, 1882, Jan. 18, May 31, Oct. 24, 1885, March 20, 1885; L’Abeille, March 30, 1881, Jan. 1, 1885, Jan. 10, June 23, 1886, Feb. 2, 1887, Jan. 29, 1888; Watkins, Causes of the Insalubrity, 13–19. The one significant paving project of the decade was the asphalt surfacing of St. Charles Avenue prior to the opening of the World’s Industrial and Cotton Centennial Exposition in 1884.


43. New Orleans *Daily Picayune*, Jan. 11, 18, Feb. 8, 29, March 6–8, 14, 19, 28, May 9, July 12, 1884, April 2, 17, 1885; *LaBeille*, June 12, July 26, 1885.


51. See, for example, *Evil and the Remedy*. The pamphlets were prepared by individual members and committees of the New Orleans Medical and Surgical Association.

52. New Orleans *Daily Picayune*, Jan. 20, Feb. 8, March 5, April 18, June 20, Dec. 5, 1884; Stanford E. Chaillé, “Importance of Introducing the Study of Hygiene into the Public and Other Schools,” *New Orleans Medical and Surgical


56. New Orleans Daily Picayune, Aug. 8, 1884; Proceedings of the Sanitary Council of the Mississippi Valley, Held in the City of New Orleans, March 10–11, 1885 (Springfield, Ill., 1885), 16.


60. *Investigation and Refutation of Certain Statements and Charges Made to His Excellency, the President, and to the Senate and House of Representatives of the United States of America, by the National Board of Health in its Annual Report for the Year 1882* (New Orleans, 1883), 11.


62. For biographical sketches of Holt, see Edmond Souchon, "Original Contributions of Louisiana to Medical Sciences," *Louisiana Historical Society Publications* 8 (1914–15): 83; George Engelhardt, *The City of New Orleans* (New Orleans, 1894), 173–74. Two ASA members were also appointed to the new board: former mayor Joseph A. Shakspeare and Joseph Kohn, a prominent merchant.


70. Ibid., 8–9.

71. Ibid., 10–28.


74. L’Abeille, April 7, 1879; the expression means simply “no money.” Jackson, New Orleans in the Gilded Age, 60–63. Professor Jackson cites the funding program of Mayor Joseph A. Shakespeare’s first administration (1880–82) as one of the city’s most progressive accomplishments of the decade.

75. Oliver Evans, New Orleans (New York, 1959), 15. See also Atlanta Constitution, March 2, 1885. The Constitution’s humorist, “Bill Arp,” visiting the World’s Industrial and Cotton Centennial Exposition, reported his observations of a New Orleans Sunday: “The saloons and billiard halls and shooting galleries and faro banks and lottery agencies are all open and in full blast. The racing went on as usual, and there was a prize fight in public and a chicken main, and the theater band paraded through the streets in a band wagon and played ‘Oh, Jinny is your ash cake done.’ ” He also noted that “the streets are filthy and the gutters awful and [the citizens] get hardened to it just like a man’s system can absorb opium until the drug does not affect him.”

76. Origin and Objects of the New Orleans Draining and Paving Association, 5.

6. Tales of Romance from Memphis


4. Clotfelter, "Memphis Business Leadership," 4. The group consisted of George Gantt, Minor Meriwether, and B.M. Estes, who were lawyers, and Napoleon Hill, J.T. Pettit, and David T. Porter, who were cotton merchants and insurance men. See Shields McIlwaine, Memphis Down in Dixie (New York, 1948), 226: "Napoleon Hill was a model businessman—alert, keen, honest, personally generous, but no reformer, no philanthropist."


8. Memphis Daily Avalanche, Feb. 1, 1879. See C.W. Heiskell, comp., Digest of the Ordinances of the Taxing District of Shelby County, Tennessee (Memphis, 1879), 1–43; Bejach, "Taxing District," 15; John E. Harkins, Metropolis of the American Nile: Memphis and Shelby County, An Illustrated History (Woodland Hills, Calif., 1982), 92–95; Lynnette Boney Wrenn, "The Taxing District of Shelby County: A Political and Administrative History of Memphis, Tennessee, 1879–1893" (Ph.D. diss., Memphis State University, 1983), 7–37. Besides Porter, the other two members of the executive three-man board of fire and police commissioners were John Overton, Jr., planter-capitalist, and Michael Burke, general superintendent of the Mississippi and Tennessee Railroad. Named to the five-member board of public works were Charles W. Goyer, of C.W. Goyer and Company, seller of wholesale meat and provisions, and president, Union and Planters Bank; John Gunn, of Gunn and Black lumber dealers and Gunn and Fagan Iron Works; Robert Galloway, proprietor of the Peabody Hotel; William N. Brown, of Jones, Brown and Company, cotton factors; and James M. Goodbar, of Goodbar and Company, seller of wholesale boots and shoes. Wrenn argues that the limitation on representative democracy inaugurated by the Taxing District was the chief feature of Memphis government until the 1960s.


10. First Report of the State Board of Health of the State of Tennessee, April 1877, to October, 1880 (Nashville, 1880), 38, 345, 349–50; Memphis Daily Appeal, May 1–2, 1879; Memphis Daily Avalanche, May 1–2, 1879. The assembled health officers made no secret of their suspicion of and enmity toward the Louisiana State Board of Health. The initial objective of the Sanitary Council of the


21. Ibid., 2, 8; First Report of the State Board of Health, 397–398.
22. See also Memphis Daily Appeal, Sept. 5, 1879.
23. Report of the Howard Association of Memphis, 2–7, 18–19. Throughout the remaining weeks of the epidemic, the Howards were the object of incessant newspaper attacks in the form of charges of corruption and dishonesty. These charges appear to have been wholly without foundation.
27. Frank Leslie’s Illustrated Newspaper, Sept. 20, 1879.
28. First Report of the State Board of Health, 389–90. During late September and early October a prominent local gin operator, Noah Speers, Jr., backed by the Memphis Cotton Exchange, sought to break the cotton embargo. Speers even contrived the special appointment of a judge, during a normal bench vacancy, who issued an injunction staying the enforcement of Rule no. 6. After an exchange of writs and threats, Dr. Plunket found a judge to issue a counterinjunction restraining Speers and vacating his injunction. See Annual Report of the National Board of Health, 1879, 24. The largest item in the National Board of Health’s expenditures for 1879 was the $47,742.03 allocated to the Tennessee State Board of Health.
29. “Appendix,” American Public Health Association Reports 5 (1879): 244–56. The American Public Health Association’s membership roll for 1879 showed that sixteen Memphians, twelve physicians and four laymen, had joined the organization.
31. Memphis Daily Appeal, Nov. 29, 1879; Acts of Tennessee, 41st Assembly, called sess., 1879, chap. 1, pp. 11–13; Heiskell, comp., Digest of the Ordinances, 49–51; Calvin F. Vance, Past and Future of Memphis (Memphis, 1882), 4. Accompanying Billings as members of the national board committee were Major W.H.H. Benyaurd, U.S. Army Engineers; Dr. C.F. Folsom, Massachusetts State Board of Health; Colonel George E. Waring, Jr., drainage engineer; and Captain Charles Smart, U.S. army, water analysis expert.
32. Annual Report of the National Board of Health, 1879, 244–45.
33. Ibid., 245–55.
34. Ibid., 259–60. Using a chlorine sampling technique, the committee’s water expert, Dr. Smart, found that 158 of 458 cisterns were leaky and that 82 were seeping. He also found that 14 of 19 wells contained sewage.
35. Ibid., 259–60.
36. Ibid., 252.


41. Biennial Report of the President of Fire and Police Commissioners of the Taxing District, Shelby County, Tennessee, to the Governor of the State, December 1, 1886 (Memphis, 1886), 4, 31.


43. Thornton, “Six Years’ Sanitary Work,” 446–47. See also Tarr, “Separate vs. Combined Sewer Problem,” 323–26. An evaluation of the Memphis system in 1887 by the noted sanitary engineer Rudolph Hering confirmed all of the objections to Colonel Waring’s design he and other engineers had originally presented. The economy of the Waring separate system, however, was the decisive factor in its acceptability to the Taxing District leadership.


Rosenau, Preventive Medicine and Hygiene, 691–842; Smillie, Public Health, 340–347; Schlesinger, Rise of the City, 104–5. “Only about six hundred cities had public waterworks in 1878,” wrote Schlesinger, “but in the next two decades their number grew nearly sixfold.”


47. Charles Hermany, Report of the Chief Engineer to the Water-Works & Sewerage Commissioners upon a Public Water Supply and a System of Drainage for the City of Memphis (Louisville, Ky., 1868).


49. Memphis Appeal, Aug. 19, Nov. 9, 28, Dec. 17, 1886; Memphis Avalanche, March 6, 20, April 3, 1887.


51. Digest of the Charter and Ordinances of the City of Memphis (Memphis, 1892), appendix, 163–74.


54. C.W. Heiskell, comp., Digest of the Ordinances of the Taxing District of Shelby County, Tennessee (Memphis, 1887), ix; Digest of the Charter and Ordinances
210 Notes to Pages 118–120


58. Thornton, “Memphis Sanitation and Quarantine,” 197–99. See also Smillie, Public Health, 325. At a special meeting of the Sanitary Council of the Mississippi Valley in New Orleans in Dec. 1880 Thornton and other members adopted a resolution: “That in our opinion the General Government alone, acting through its sanitary agents, should have the direction and control of national and maritime quarantine.”

59. Thornton, “Memphis Sanitation and Quarantine,” 200; Annual Report of the Board of Health of the Taxing District, 1880, 9–10; Memphis Daily Appeal, May 15, 1880; Memphis Daily Avalanche, Oct. 1, 1880. Quarantine stations were also maintained by the National Board of Health at Vicksburg and at Cairo.


68. See "The Quarantine Service on the Lower Mississippi," *New Orleans Medical and Surgical Journal* 14 (June 1887): 977–81, and Memphis Avalanche, June 1, 1887. After 1885 Memphis health authorities became more concerned about what appeared to be the new yellow fever trouble spot, Florida.


74. Memphis Avalanche, Sept. 9, 12–13, 1888.
75. Ibid., Sept. 15, 1888.
76. Ibid., Sept. 14, 1888.
78. Memphis Avalanche, Sept. 23, 1888.
86. Ibid., Sept. 29–October 1, 1888; Memphis Avalanche, Sept. 28–Oct. 12, 1888.

7. The Sanitary Question in Atlanta

4. Atlanta City Council Minutes (Atlanta City Hall), Feb. 17, 1879.
6. Atlanta City Council Minutes, April 7, 1879. See Wotton, “New City of the South,” 385. The fire limits, periodically extended by the city council, was the area in which wood construction of buildings was prohibited.

7. Atlanta City Council Minutes, July 21, 1879. This extensive ordinance superseded all previous regulations concerning subjects of sanitary inspection.


11. Atlanta City Council Minutes, [Jan. 5, 1880], Jan. 3, 1881, Jan. 2, 1882; Annual Report of the Board of Health of the City of Atlanta, 1879 (Atlanta, 1880), 39–40. See also Annual Report of the Board of Health of the City of Atlanta, 1884, 2; 1887, 2; 1888, 2. The original board included Dr. William S. Armstrong, Dr. James B. Baird, Dr. William G. Drake, Aaron Haas, and Frank P. Rice. Dr. James F. Alexander replaced Dr. Drake in 1884, and Henry B. Tompkins replaced Rice in 1887. Judge Tompkins was replaced the following year by Dr. William N. Curtis.


13. Ibid., 2–5.


15. Atlanta Constitution, March 13, Aug. 6, 1884, Feb. 20, 1886. Annual Report of the Board of Health of the City of Atlanta, 1883, 7; 1884, 12; 1885, 12–13; 1886, 27–28. The Westview Cemetery Association was composed of Atlanta’s white elite, and under city sponsorship it was able to obtain a 577-acre tract three and one-half miles west of the passenger depot for $25,000. The black citizens, lacking the city’s support, were obliged to pay $3,500 for their 25-acre tract.


20. Ibid., Feb. 3, 1885.

22. Annual Report of the Board of Health of the City of Atlanta, 1880, 55; 1884, 11; 1886, 33; 1888, 7, 43.


25. Atlanta Journal, July 9, 1884; see also July 25, 1883.


29. "The Street Committee," in Atlanta City Council Minutes, [Jan. ?, 1881]. See also "Mayor-Elect [James W.] English's Address," in Atlanta City Council Minutes, [Jan. ?, 1881]. In 1881 the city engineer estimated the cost of the most economical macadam ("broken stone") at fifteen thousand dollars per mile, not including gutters and curbing, which raised the minimum estimate to twenty-three thousand dollars per mile. Mayor English stated in his inaugural address in Jan. 1881 that "when it is considered that we have over one hundred and thirty miles of streets, and that only about four have paving of any kind upon them, it will be seen at a glance that our means are totally inadequate for this work." The chain gang was Atlanta's only racially and sexually integrated social group, although the majority of its members throughout the decade were black women. The Atlanta Constitution observed on Jan. 7, 1879, and on numerous other occasions that "the negro women give the police a great deal more trouble than the men."


31. J.A. Anderson, comp., The Code of the City of Atlanta, Containing the Charter of 1874, and the Amendments Thereto, Certain other Laws of the State,
the Ordinances Adopted by the Mayor and General Council (Atlanta, 1899), 53–55.

32. John Berkele, a member of the council Committee on Sewers and Drains, was elected to the one-year term and named chairman. M.E. Maher, a wholesale liquor dealer, was elected to the three-year term.


35. *Atlanta Constitution*, July 9, 1884; see also Jan. 20, 1884. See *Atlanta Journal*, Feb. 2, 1884.


38. Atlanta City Council Minutes, June 25, 1886. *Annual Report of the Board of Health of the City of Atlanta*, 1885, 15; 1886, 27; 1887, 40. *Atlanta Constitution*, April 27, 1888. By 1883 it was common knowledge among citizens that the Board of Street and Sewer Commissioners was engaged in dishonest practices. In the summer of 1886 Mayor George Hillyer undertook an investigation of charges that collusion was involved in the bidding for city paving contracts.

39. *Annual Report of the Board of Health of the City of Atlanta*, 1881, 3. See also *Atlanta Constitution*, March 7, June 6, 21, July 23, 1879. The *Constitution* reprinted a report on privies by the Memphis Auxiliary Sanitary Association and recommended that “the city authorities . . . forthwith cause every vault to be filled up.”


46. *Annual Report of the Board of Health of the City of Atlanta*, 1882, 15; 1883, 11; 1884, 16; 1885, 11–12; 1886, 23–24; 1887, 25. See also *Atlanta Constitution*, Aug. 23, 1888.
47. Annual Report of the Board of Health of the City of Atlanta, 1888, 30–32.
48. Atlanta Constitution, Jan. 30, 1885; see also Sept. 5, 1883. See “Annual Report of the Committee on Wells, Pumps and Cisterns for the Year 1878,” in Atlanta City Council Minutes, [Jan. ?, 1879].
49. Annual Report of the Officers of the City of Atlanta, 1885, 22. See also An­
nual Report of the Board of Health of the City of Atlanta, 1887, 18–19. The board of
health unsuccessfully urged the city council to grant it authority to have con­
demned wells filled in.
nual Report of the Officers of the City of Atlanta, 1885, 13; 1886, 44; 1887, 19; 1888, 23,
29, 1886; Atlanta Journal, July 23, 1886. Since the well water was “perfectly
clear,” it was initially assumed to be “absolutely pure.” The city council’s ob­
jective was to supply the business district and principal residential sections
with water suitable for drinking, bathing, and commercial use. Aside from
the question of safety, however, the artesian water supply also proved to be
limited. The Board of Water Commission­ers authorized construction of a wa­
ter tower and standpipe in 1886, yet Super­intendent Richards reported that
the artesian well’s output for 1887 averaged slightly less than nineteen thou­sand gallons per day.
Maryland Historian 8 (Spring 1977): 5–7; “Valedictory Address of Hon. N.L.
Angier—retiring,” in Atlanta City Council Minutes, [Jan. ?, 1879]; “Water­
works Superintendent’s Report for 1879,” in Atlanta City Council Min­
utes, [Jan. 5, 1880]; Annual Report of the Officers of the City of Atlanta, 1883,
64–66. Initially the cost of waterworks service was charged at a flat rate for
each tap or faucet opening. There were 1,009 entries in the waterworks su­
perintendent’s tap book in 1879, an increase of but 200 over the previous
year.
52. Annual Report of the Board of Health of the City of Atlanta, 1881, 4; 1883,
9–10. Annual Report of the Officers of the City of Atlanta, 1883, 64–66, 92; Atlanta
Constitution, July 9, 1881, March 1, 29, 1882, Aug. 18, Oct. 27, 1883.
53. Annual Report of the Board of Health of the City of Atlanta, 1884, 13–14;
1888, 18. Annual Report of the Officers of the City of Atlanta, 1885, 42–44; 1886,
44–45. Atlanta Journal, Nov. 5, 1884; Atlanta Constitution, June 24, July 13,
1884, Jan. 31, April 15, May 17, 24, 30, June 16, 1885, Nov. 19, 1886. Of the
2,077 entries in the waterworks superintendent’s tap book in 1886, only 1,372
were in service. At that time less than one-third of the area within the city
was accessible to waterworks mains, and out of approximately nine thou­
sand houses and buildings, little more than 10 percent were regularly sup­
plied with water. The two spring branches that fed the South River
reservoir—Hardin’s branch and Todd’s branch—rose within the corporate
limits of Atlanta, and during rains they became channels for the washings
from hundreds of lots and stables, tanneries, slaughter pens, railroad shops,
and the county convict camps, as well as for the outfalls of sewers. Beginning
in 1879 the board of health regularly saw to the removal of dead animals from
the branches and, through the sanitary inspectors, enforced the ordinance prohibiting tanneries and livestock pens from locating in the watershed.

54. Atlanta Constitution, April 21, 1887.
58. Atlanta Constitution, Oct. 5, 1881. See also Atlanta Journal, July 18, 1883. The evening paper put it this way: "We have been accustomed so long to the stereotyped brag concerning our elevated location, bracing climate, good water, etc., that we have lulled ourselves."

8: Public Health in the New South

5. New Orleans Daily Picayune, Oct. 2, 1882, quoting Nachitoches People's Vindicator. The Vindicator went on to say: "We are quite as anxious as our New Orleans fellow-citizens that they should regain and increase their trade and will do all in our humble power to aid to that end, but surely some other means must be employed than cheapening river freight to a local trade. They must give better terms to customers, sell goods as cheap, cut down their commissions, destroy the rebate system, handle by improved appliances, lessen wharfage charges, cheapen railroad freights, and numerous other things must they do before they can hope to compete with that live, moving, active business spirit of the North."
8. Mark Twain, Life on the Mississippi (New York, 1883), 342–43.
10. L'Abeille de la Nouvelle-Orléans, Aug. 12, 1883: "Without industry we have no prosperity; without immigration we have no industry."

11. Donald C. Hardy, “The World’s Industrial and Cotton Centennial Exposition” (M.A. thesis, Tulane University, 1964), 88. See also Jackson, New Orleans in the Gilded Age, 204–7. The city’s lingering reputation as a plague spot was no small hindrance to the exposition’s success.


14. Ibid., 70–75. See also Gerald M. Capers, The Biography of a River Town: Memphis, Its Heroic Age (Chapel Hill, N.C., 1939), 214–26, and James C. Cobb, Industrialization and Southern Society, 1877–1984 (Lexington, Ky., 1984), 5–26. “The South entered the twentieth century,” Cobb contends, “with an economy that remained predominantly agricultural. Industry was more important to that economy than it had been forty years earlier, but the plantation still towered above the factory, shaping it and most of the rest of southern society in its own image.”


18. James Harvey Young, “Three Southern Food and Drug Cases,” Journal of Southern History 49 (Feb. 1983): 5. “In 1890,” said Professor Young in his 1982 presidential address to the Southern Historical Association, “Atlanta derived a larger proportion of its gross municipal exportable product from proprietary medicines than did any other city in the nation, and the capital accumulated in selling such remedies fueled Atlanta’s rise to New South leadership.” See also James Harvey Young, “Patent Medicines: An Element in Southern Distinctiveness,” in Todd L. Savitt and James Harvey Young, eds., Disease and Distinctiveness in the American South (Knoxville, Tenn., 1988), 154–93.


78. Exulting over the city's selection as the site of the 1996 Olympics, attorney Billy Payne tells that "what we wanted to establish [with the International Olympic Committee] is that we've matured and grown over the past 120 to 130 years. While we're not all the way to perfection, we've made great progress. Perhaps no city exemplifies that progress better than Atlanta—and they saw it firsthand."


24. Jackson, New Orleans in the Gilded Age, 45.

25. Ibid., 45–47.


32. Ibid., 353, quoting Memphis Appeal-Avalanche, March 20, 1891.

33. Ibid., 352–99.

34. Russell, Atlanta, 205. Russell contends that "the argument that Atlanta residents got what they paid for in the delivery of municipal services is generally false."

36. Atlanta Constitution, Jan. 17, 1884; Writers' Program of the Work Projects Administration in the State of Georgia, comp., Atlanta: A City of the Modern South (New York, 1942), 44–45. The amendment was repealed in 1887.

37. Annual Report of the Officers of the City of Atlanta for the Year Ending Dec. 31, 1886, Showing the Condition of Municipal Affairs (Atlanta, 1887), 28; see also 1885, 6–7, 124. See Atlanta Constitution, Nov. 26, 1885, July 3, Oct. 20, 1886, Jan. 4, 1887; Atlanta Journal, July 1, 1886; Edgar G. Epps, "The Participation of the Negro in the Municipal Politics of the City of Atlanta, 1867–1908" (M.A. thesis, Atlanta University, 1955), 26–29; and Norman H. Clark, Deliver Us from Evil: An Interpretation of American Prohibition (New York, 1976). Epps shows that there were 3,600 black voters in Fulton County at the time of the referendum and that black community leaders worked for prohibition.

38. Atlanta Journal, March 25, April 1, 1887.


40. Atlanta Constitution, Nov. 1–27, 1887; Epps, "Participation of the Negro," 29–31; John Hammond Moore, "The Negro and Prohibition in Atlanta, 1885–1887," South Atlanta Quarterly 69 (Winter 1970): 38–57. In the city campaign following the referendum, a number of blacks were nominated on several mixed antiprohibition tickets, in an obvious effort to divide their vote. Most black voters, however, supported the regular Citizens' antiprohibition faction against the prohibitionist Atlanta ticket. It is difficult to generalize, but in some ways the conflict possessed undertones of struggle between working-class whites and blacks against the Grady–regular Democrat–New South establishment. The principal struggle, however, was between two factions of the dominant order. In supporting either, blacks were bound to lose. Professor Moore, however, sees the events as an episode in interracial social and political cooperation.


46. New Orleans Daily Picayune, Nov. 9, 1879.

47. Ibid., Jan. 6, 1885; Joseph A. Holt, M.D., to George W. Cable, April 24, 1889, Cable Collection, Manuscripts Division, Howard-Tilton Library, Tulane University; Warner, Studies in the South and West, 50. John Richling, a character in Cable's novel Dr. Sevier (New York, 1883) complained to the physician: "The whole town's asleep!—sound asleep, like a Negro in the sunshine! There isn't work for one man in fifty" (153).

48. See Lynette B. Wrenn, "The Impact of Yellow Fever on Memphis: A Reappraisal," West Tennessee Historical Society Papers 41 (1987), 4–18. Arguing that the importance of yellow fever in Memphis's history has been overstated, Wrenn contends that "viewed in the context of local, regional, and national history, the yellow fever epidemics of the 1870s emerge as only one of a number of major factors which shaped Memphis during the years after the Civil War." This statement is obviously true. Yet in concluding her presentation, Wrenn asserts that "Southern cities generally had the fewest immigrants, the most blacks, and among the least cosmopolitan cultures of any urban centers in the United States. In the long run, little of this is attributable to yellow fever." On the contrary, the loss of cultural elements in 1873 and 1878 that were never replaced is directly attributable to yellow fever, which stands as a towering milestone in the city's social and cultural history.

49. David R. Goldfield, "The Urban South: A Regional Framework," American Historical Review 86 (Dec. 1981): 1020. For a comparison with the numbers of foreign-born in other southern cities in 1880, see Lawrence H. Larsen, The Rise of the Urban South (Lexington, Ky., 1985), 43. Goldfield states that in 1900, 15 percent of Memphis's population was foreign-born; he cites William D. Miller, Memphis during the Progressive Era, 1900–1917 (Memphis, 1957), 7. What Miller actually shows is that "by 1900 both the foreign born and those natives whose parents were foreign born amounted to only 15 percent."

the American mainstream in its economic behavior," argues Wright, "it emerged in the 1870s as a low-wage region in a high-wage country, a consideration that shaped its economic future for another century."

51. Sigafoos, *Cotton Row to Beale Street*, 98. He goes on to say that "Birmingham had a figure of 43 per cent; Atlanta 40; Washington, D.C., 31; and New Orleans 27. Only six per cent of St. Louis' population was black; only five per cent in Philadelphia; and two per cent in Chicago."


55. Second Report of the State Board of Health of the State of Tennessee, October, 1880–December, 1884 (Nashville, 1885), 278–79; G.B. Thornton, "Negro Mortality of Memphis," *Mississippi Valley Medical Monthly* 2 (Nov. 1882): 413–26. A vital statistics registration act, passed by the Tennessee legislature in 1881, was repealed in 1883. Finally, in 1913 the recording of vital statistics was again required by state law. There was no state board of health in Georgia during the period 1876–1903 and, consequently, no state legislation requiring registration of vital statistics. The mortality statistics given here should be considered as understated, since they were invariably based on inflated population estimates. The reality of disease and death was much greater.


59. *Annual Report of the Board of Health of the City of Atlanta, 1897*, 196; *Mortality among Negroes in Cities*, Atlanta University Publications no. 1 (Atlanta, 1896), 25. Almost 80 percent of typhoid cases occurred among lower-class blacks, who drank well water. A black Atlanta physician, Dr. H.R. Butler, reported in 1896 that "they [whites] live in the cleanest and healthiest parts of the city, while we live in the sickliest and filthiest parts."


67. Ibid.


72. Margaret Ellen Warner, “Public Health in the New South: Government, Medicine and Society in the Control of Yellow Fever” (Ph.D. diss., Harvard University, 1983), 176. See also Duffy, Sanitarians, 139, and Jo Ann Carrigan, “Yellow Fever: Scourge of the South,” in Todd L. Savitt and James Harvey Young, eds., Disease and Distinctiveness in the American South (Knoxville, Tenn., 1988), 66. “As the preeminent southern pestilence,” writes Carrigan, “yellow fever continued to be the main force driving southern efforts at health reform throughout the nineteenth century and into the early years of the twentieth.”


74. Goldfield, Cotton Fields and Skyscrapers, 130.


77. Dana G. Ketchum, “Yellow Fever in New Orleans: A Study of the Decline in Incidence of Yellow Fever in the Crescent City from 1861 to 1905”

78. The sanitary reforms begun in the 1880s were carried to fruition in the Progressive Era. See Martin Behrman, The History of Three Great Public Utilities—Sewerage, Water, and Drainage and Their Influence upon the Health and Progress of a Big City (New Orleans, 1914); Miller, Memphis during the Progressive Era; and the forthcoming study by Stuart Galishoff of Georgia State University, "Public Health in Atlanta during the Progressive Era."

79. James O. Breeden, "Disease as a Factor in Southern Distinctiveness," in Savitt and Young, eds., Disease and Distinctiveness, 13.

Index

Note: Italic numbers indicate illustrations.

Abeille de la Nouvelle-Orléans, L', 42, 52, 61, 93, 104-48
Abercrombie, Dr. John, 106
Adams, John, 63
Aedes aegypti mosquito, 31, 110, 167
African-Americans: population of, 17-19; social status of, 20-23; hostility toward Irish, 23; diseases among former slaves, 30; and resistance to yellow fever, 31, 57, 59, 108; and prohibition, 155
Alexander, Dr. James H., 213 n 11
Allen, Ivan, 36
American (Know-Nothing) party, 24
American Medical Association (AMA), 8, 75; Committee on Public Hygiene, 8
American Public Health Association (APHA), 12, 60, 62-69, 75-78, 81, 99, 119, 120
Angier, Noel L., 41, 44
anticontagionism, 4, 41, 67, 73, 80, 82, 167
Armstrong, Dr. William S., 128, 213 n 11
Artesian Water Company (Memphis), 117
Asiatic cholera epidemics, 3, 5, 6, 8, 11, 12, 22, 30, 34, 35, 37, 120; incidence of, 180 n 77
Association for Improving the Condition of the Poor (New York City), 11
Association for Promoting Cleanliness among the Poor (Great Britain), 170 n 20
Athey, Philip, 48, 107
Atlanta: situation for, 14-15; commercial growth of, 15-16, 17, 149-51; industrial development in, 16-17, 150; population of, 17–19, 157, 160, 161; social structure in, 19-23, 142-43; slums in, 22; government and politics in, 23-25, 125, 126, 145, 154-57; site of, 26, 145; drainage of, 27, 135, 139, 140-41, 144; sewer system in, 27, 137, 139-42; street conditions in, 27-28, 132-33, 134-39, 214 n 27; garbage collection in, 28, 132, 133-34; water supply for, 28-29, 130-31, 139, 140, 142-44, 216 n 51, 216-17 n 53; prevalence of disease in, 29-30, 32, 36; epidemics in, 30, 40-41, 53-54, 59, 125, 128, 139, 144-45, 149; mortality rate of, 32-33, 129-30, 142, 145, 161-65; board of health in, 34, 53, 127, 128-29, 130-32, 134, 136, 140, 145, 161; public health in, 34, 35, 149; refugees from epidemic of 1878 in, 43-44, 53; health ordinances in, 126-27, 133; food inspections in, 130-31; sanitation budget in, 131-32; flooding in, 135
Atlanta Board of Water Commissioner, 131
Atlanta Constitution, 40-41, 44, 53, 59, 61, 79, 125-27, 130, 131, 136-39, 141-45, 149-51, 155, 156, 161
Atlanta Journal, 131, 134, 138, 141, 155, 156, 161
Atlanta Medical and Surgical Journal, 23, 32, 73, 74, 79, 131, 133
Atlanta Medical Register, 142
Atlanta Medico-Chirurgical Association, 53
Atlanta Mercantile Association, 16
Atlanta Rolling Mill, 16-17
A.T. Stewart and Company (New York City), 45
Auxiliary Sanitary Association (ASA): of New Orleans, 86-103 passim, 107, 151; of Memphis, 107
Badger, Roderick D., 20, 23
Baird, Dr. James B., 128-31, 134, 140, 141-42, 145, 213 n 11
Baird, Spencer Fullerton, 62
Baldwin, Albert, 86, 96-97, 197 n 4
Baldwin, Mr. (New Orleans store employee), 44
Baltimore, Maryland, 163
Banks, Gen. Nathaniel P., 35
Barton, Dr. Edward Hall, 14, 35, 36, 171 n 33
Baton Rouge, Louisiana, 51, 65
Beauregard, Gen. P.G.T., 177 n 53
Beck, James, 77
Beckwith, Bp. John W., 127-28
Behan, William J., 95
Behrman, Martin, 152-53
Bell, Dr. A.N., 86, 141
Bemiss, Dr. Samuel Merrifield, 40, 63-64, 65, 66-67, 73, 76
Benner, Lt. Hiram H., 54
Bent, James, 138
Bentham, Jeremy, 3, 6
Benyaurd, Maj. W.H.H., 207 n 31
Biloxi, Mississippi, 121
Bingham, Alabama, 121
Black, Dr. J.E., 123
Black, William C., 85, 197 n 4
blacks. See African-Americans; free blacks
boards of health: in Britain, 5-6; in the U.S., 9-10, 12, 33-34, 68, 120, 194 n 73; in Atlanta, 34, 53, 127, 128-29, 130-32, 134, 136, 140, 145, 161; in Memphis, 34, 41, 42, 43, 47, 54, 106-7, 122, 161, 182 n 93; in New Orleans, 34, 59, 164. See also Georgia State Board of Health; Louisiana State Board of Health; Tennessee State Board of Health
Boston, Massachusetts, 163, 165
Boutwell, George S., 62-63
Bowditch, Ernest W., 141
Bowditch, Dr. Henry I., 86
Bowling, Joseph, 197 n 4
Bowling Green, Kentucky, 53
Brickell, Dr. D. Warren, 91
Brinkley, Rev. William, 48
Brown, Henry C., 89-90
Brown, Joseph E., 136, 144, 155
Brown, William N., 205 n 8
Brownsville, Tennessee, 51
Brownsville, Texas, 121
Brunswick, Georgia, 32, 34, 149
Buell, Gen. Don Carlos, 50
Bullock, Rufus B., 155
burial practices, 43, 48-51, 49, 111
Burke, Maj. E.A., 25
Burke, Michael, 205 n 8
Burwell, Col. William M., 74, 86
Bussey, Gen. Cyrus, 86, 107, 188 n 50
Butler, Gen. Benjamin F., 35
Butler, Dr. H.R., 222 n 59
Cabell, Dr. James Lawrence, 65, 79
Cable, George Washington, 159-60
Cairo, Illinois, 210 n 59
Cammack, Laura, 40
Camp Douglass, 108
Camp Duffy, 47
Camp Father Matthew, 47
Camp Joe Williams, 47
Camp Wright, 47
Capers, Gerald M., 16, 19, 25, 123
carbolic acid, 38, 42
Carrington, Dr. P.S., 38-39
Cassedy, James, 6, 10
Catholic Total Abstinence Union, 47
Cavens (engineer on Charlie B. Woods), 40
Celli, Mrs. Joseph, 189 n 2
Chadwick, Edwin, 4-5, 7, 123, 166, 171 n 33
Chaillé, Dr. Stanford Emerson, 36, 87, 97, 98, 193 n 53
Charlie B. Woods (steam tug), 40
Chattanooga, Tennessee, 43, 53, 65
Chesbrough sewerage system, 89
Chicago, Illinois, 163, 166
Chicago Times, 60
Chittenden, Simeon B., 193 n 52
cholera. See Asiatic cholera epidemics
Choppin, Samuel P., 38, 40, 42, 57, 65, 67, 70, 74
Cincinnati, Ohio, 43, 65
cities, sites versus situations for, 14
Citizens' Association (New York City), 11-12
Citizens' Relief Committee (Memphis), 47, 48, 52
Citizens' Sanitary Commission (Memphis), 42
civil religion, 9
Civil War, 11, 16-17, 18-19, 21, 22, 24, 35
Claiborne, William C.C., 34
Clapp, Rev. Theodore, 21
Clark, G. Kitson, 4
Clark, John, 39, 40, 185 n 7
Clarke, Marshall J., 213 n 9
Clayton, R.M., 138
Clofelter, Charles, 105-6
Cochran, Dr. Jerome, 64, 65, 73, 76
Coleman, Dr. W.L., 107
Colored Preachers' Aid Society, 48
commerce: in Atlanta, 15-16, 17, 149-51; in Memphis, 15-16, 17, 148-49; in New Orleans, 15-16, 17, 146-47
Committee of Forty-Nine (Atlanta), 24
Conference for the Study of Problems Concerning Negro City Life, 165
Conover, Simon B., 193 n 51
consumption (pulmonary tuberculosis), 29, 144-45, 163
contagia, 4
contagious disease theory, 3-4, 38, 41, 67, 74, 75, 80
contingent-contagionism, 4, 67
convict lease system, 21, 92, 94, 135-36, 137, 214 n 29
Cook, Annie, 50
Cooper, John Tyler, 156, 157
Cooper, Peter, 11
copperas solution, 111
Council of Hygiene and Public Health (New York City), 12
Covington, Tennessee, 47, 50
Craft, T.S., 193 n 53
Creoles, 19, 23, 57, 159
Cuban refugees, 38
disease: in slums, 2-3, 6, 8, 12, 30, 60, 165-66; as cause of poverty, 3, 6; theories of causation, 3-4, 35, 84; means of prevention of, 5, 9, 171 n 33; cost of, 7, 35, 36-57, 124. See also names of specific diseases
doctors. See medical profession
Dolhonde, Forrester, 45, 58, 70-71
Doyle, Don H., 21, 148
Draft Riot (New York City), 11
drainage: of New Orleans, 25, 27, 84, 87, 89-90, 92-93, 101-2, 159; of Atlanta, 27, 135, 139, 140-41, 144; of Memphis, 27, 113-15. See also flooding; sewer systems
Drake, Dr. William G., 213 n 11
Drew, Dr. Emanuel S., 39, 185 n 7
Du Bois, W.E.B., 20
Duffy, John, 1, 6, 11, 80, 166
dysentery, 29, 30, 163
drug
Eaton, Dorman B., 12, 76, 195 n 79
eclectics, 7
Edwards, Jonathan, 9
Effects of Arts, Trades and Professions and of Civic States and Habits of Living on Health and Longevity, The (Thackrah), 4
Elliot, Thomas, 39-40
Ellis, E. John, 188 n 50
Emily B. Souder (steamer), 39-40
English, James W., 136, 155
enteric diseases, 140
Estes, B.M., 205 n 4
Eustis, James B., 72-73, 74, 77, 193 n 51
Evans-Ramsey bill, 77
Farr, William, 4
Fenner, Edward, 86, 90, 93, 98, 99, 102-3, 104, 146, 197 n 4
Fenner, Dr. Erasmus Darwin, 35, 36, 171 n 33
fire insurance, 143
Fish, Hamilton, 11
Fisher, Charles G., 47, 48, 50, 52
Fisher, Susie, 47, 50
Flippin, John R., 41, 42, 48
flooding: around Memphis, 26; in New Orleans, 26, 27, 91-93; in Atlanta, 135
Florida, 211 n 68. See also Jacksonville; Key West
folk healers, 7
Folsom, Dr. C.F., 207 n 31
Fordyce, James, 39
Frank Leslie's Illustrated Newspaper, 54
free blacks, 17, 20, 23, 160
Freedmen's Bureau, 21, 30

Galisoff, Stuart, 166
Gallipolis, Ohio, 56, 65
Galloway, Robert, 205 n 8
Gantt, George, 205 n 4
garbage collection, 7, 10; in Atlanta, 28, 132, 133-34; in Memphis, 28, 107, 108, 113, 118; in New Orleans, 28, 85, 87, 89, 93-95, 152
Garfield, James A., 73, 193 n 52
Garland, Augustus H., 193 n 51
Gaston, Paul M., 146
Gayol, Roberto, 115
Georgia: registration of vital statistics in, 34, 222 n 55; yellow fever epidemics in, 40-41. See also names of individual cities
Georgia Academy of Science, 127, 128
Georgia State Board of Health, 34, 80
Germany, immigrants and refugees from, 18, 20
germ theory, 67
Gibson, Randall L., 188 n 50, 193 n 52
Gilman, Daniel Coit, 191 n 36
Ginder, Henry, 45, 86
Glenn, John T., 157
Goldfield, David R., 166
Goodbar, James M., 205 n 8
Goode, John, 193 n 52
Goodwin, John B., 137, 138, 155
Gould, Jay, 110
government and politics: in Atlanta, 23-25, 125, 126, 145, 154-57; in Memphis, 23-25, 105-6, 153-54, 157; in New Orleans, 23-25, 151-53
Goyer, Charles W., 205 n 8
Grady, Henry W., 150, 155, 156
Grand Junction, Tennessee, 56
Grant, Ulysses S., 62
Graves, Richard C., 116
Green, Samuel A., 193 n 53
Greene, Gen. Colton, 116
Grenada, Mississippi, 43, 51, 56, 65
Griscom, Dr. John H., 7, 10
Guillotte, J. Valsin, 103
Gunn, John, 205 n 8
Gutheim, Rabbi James K., 197 n 7

Haas, Aaron, 156, 213 n 11
Haas, Jacob, 142
Hadden, David Park, 116, 119, 122, 123, 153-54
Hall, Lt. Charles E., 54
Hamilton, John B., 79, 119
Hardee, Col. Thomas S., 64, 73, 76
Harmer, Alfred C., 193 n 52
Harper's New Monthly Magazine, 63, 147
Harper's Weekly, 152
Harris, Dr. Elisha, 11, 65-66
Harris, Rev. George C., 187-88 n 47
Harris, Isham G., 72-73, 76-77, 78, 79, 80, 193 n 51
Hartford Life and Annuity Insurance Company, 163
Hartridge, Julian, 193 n 52
Havana, Cuba: yellow fever from, 38, 40, 41, 185 n 15
Hayes, Rutherford B., 37, 57, 61, 71, 72, 79, 80
Health of Towns Association (Great Britain), 4, 5, 10, 86
Hebrew Hospital Association, 52
hemorrhagic malarial fever, 40
Henning, Bennett C., 122
Hering, Rudolph, 142, 208 n 43
Hernsheim, Simon, 86, 197 n 4
Hickman, Kentucky, 43
Hill, Napoleon, 121, 205 n 4
Hillyer, George, 138, 141, 142, 144, 155, 156
Holcombe, Dr. William H., 74, 98
Holliday, Dr. Daniel C., 74
Holliday, Frederick W.M., 65
Holt, Dr. Joseph, 100-102, 103, 104, 120, 159-60
Homeopathic Yellow Fever Commission, 74
homeopaths, 7, 73
Hood, Anna, 88
Hood, Ethel, 88
Hood, Gen. John Bell, 88
Hood, Lydia, 88
Hooker, Charles, 193 n 52
Horter, George, 86, 146, 197 n 4
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Select Committee on Epidemic Diseases, 73-74</td>
<td></td>
</tr>
<tr>
<td>Howard, Dr. Edward Lloyd, 64</td>
<td></td>
</tr>
<tr>
<td>Howard Associations: establishment of, 32, 35; of New Orleans, 42, 44-45, 52-53, 58, 86, 88; of Memphis, 46-47, 50-52, 57, 109-10</td>
<td></td>
</tr>
<tr>
<td>Humphrey, Maj. J.H., 114</td>
<td></td>
</tr>
<tr>
<td>Hurt, Joel, 144, 149</td>
<td></td>
</tr>
<tr>
<td>Hutchins, Stilson, 188 n 59</td>
<td></td>
</tr>
<tr>
<td>individualism, 6</td>
<td></td>
</tr>
<tr>
<td>industrialization and public health: in Britain, 1-3, 4; in the U.S., 6; in Atlanta, 16-17, 150; in New Orleans, 147-48; in Memphis, 149</td>
<td></td>
</tr>
<tr>
<td>infant death rate, 33, 163, 165</td>
<td></td>
</tr>
<tr>
<td>influenza, 30</td>
<td></td>
</tr>
<tr>
<td>Inman, John, 149</td>
<td></td>
</tr>
<tr>
<td>Inman, Samuel, 144</td>
<td></td>
</tr>
<tr>
<td>intermittent bilious fever, 39</td>
<td></td>
</tr>
<tr>
<td>intermittent fevers, 39, 180 n 77</td>
<td></td>
</tr>
<tr>
<td>International Cotton Exposition (Atlanta), 145, 151</td>
<td></td>
</tr>
<tr>
<td>Ireland, refugees from, 2, 5, 18, 20, 22, 23</td>
<td></td>
</tr>
<tr>
<td>Jackson, Andrew, 14</td>
<td></td>
</tr>
<tr>
<td>Jackson, Capt. D.F., 106, 118</td>
<td></td>
</tr>
<tr>
<td>Jackson, Joy, 152</td>
<td></td>
</tr>
<tr>
<td>Jackson, Mississippi, 122</td>
<td></td>
</tr>
<tr>
<td>Jacksonville, Florida, 121</td>
<td></td>
</tr>
<tr>
<td>Jarvis, Dr. Edward, 8</td>
<td></td>
</tr>
<tr>
<td>Jewell, Dr. Wilson, 10</td>
<td></td>
</tr>
<tr>
<td>Jewish middle class, 20</td>
<td></td>
</tr>
<tr>
<td>John M. Chambers (paddle wheeler), 54, 55, 61</td>
<td></td>
</tr>
<tr>
<td>Johnson, John, 108, 110, 111</td>
<td></td>
</tr>
<tr>
<td>Johnson, Dr. John M., 35</td>
<td></td>
</tr>
<tr>
<td>Johnston, Col. William Preston, 94, 97</td>
<td></td>
</tr>
<tr>
<td>Jones, Dr. Joseph, 40, 98, 99-100, 119-20</td>
<td></td>
</tr>
<tr>
<td>Kay, James Philips, 4</td>
<td></td>
</tr>
<tr>
<td>Keating, John McLeod, 43, 118, 124</td>
<td></td>
</tr>
<tr>
<td>Key West, Florida, 121</td>
<td></td>
</tr>
<tr>
<td>Kimball, Hannibal I., 136, 149</td>
<td></td>
</tr>
<tr>
<td>King, Willis, 133</td>
<td></td>
</tr>
<tr>
<td>Knights of Pythias, 52</td>
<td></td>
</tr>
<tr>
<td>Knott, Dr. J.J., 188 n 55</td>
<td></td>
</tr>
<tr>
<td>Know-Nothing movement, 24</td>
<td></td>
</tr>
<tr>
<td>Kohn, Joseph, 203 n 62</td>
<td></td>
</tr>
<tr>
<td>Krutttschnitt, Ernest, 86</td>
<td></td>
</tr>
<tr>
<td>Ladies' Physiological Society, 52</td>
<td></td>
</tr>
<tr>
<td>Lamar, Lucius Q.C., 72, 75, 76, 77, 193 n 51</td>
<td></td>
</tr>
<tr>
<td>Langstaff, A.D., 109-10</td>
<td></td>
</tr>
<tr>
<td>Larsen, Lawrence H., 145</td>
<td></td>
</tr>
<tr>
<td>Latham, Thomas J., 115, 116</td>
<td></td>
</tr>
<tr>
<td>Leavitt, Judith Walzer, 166</td>
<td></td>
</tr>
<tr>
<td>Lee, Dr. H.B., 188 n 55</td>
<td></td>
</tr>
<tr>
<td>legislation, sanitary: in Britain, 5-6; in the U.S., 9-10, 11-12, 34, 60-82 passim, 83, 112, 118</td>
<td></td>
</tr>
<tr>
<td>Lemoyne, Jean Baptiste (sieur de Bien-ville), 14, 25</td>
<td></td>
</tr>
<tr>
<td>Leo, Gustav E., 213 n 9</td>
<td></td>
</tr>
<tr>
<td>Levois, Jules, 44</td>
<td></td>
</tr>
<tr>
<td>life insurance, 35</td>
<td></td>
</tr>
<tr>
<td>lime, 111</td>
<td></td>
</tr>
<tr>
<td>Liverpool Sanitary Act (Great Britain), 5</td>
<td></td>
</tr>
<tr>
<td>Loague, John, 110</td>
<td></td>
</tr>
<tr>
<td>Loeber, Dr. Frederick, 39</td>
<td></td>
</tr>
<tr>
<td>Logan, Dr. Joseph P, 213 n 9</td>
<td></td>
</tr>
<tr>
<td>Long, Col. Stephen H., 14</td>
<td></td>
</tr>
<tr>
<td>Louisiana State Board of Health, 12, 32, 34, 37, 38, 41, 42, 56, 58, 61, 65, 67, 70, 71, 74, 83, 85, 88, 99-100, 104, 119, 120, 182 n 96</td>
<td>145, 151</td>
</tr>
<tr>
<td>Louisville, Kentucky, 43, 53, 65</td>
<td></td>
</tr>
<tr>
<td>Lyell, Sir Charles, 20</td>
<td></td>
</tr>
<tr>
<td>McCaffrey, John, 61</td>
<td></td>
</tr>
<tr>
<td>McCandless, John M., 130-31, 143</td>
<td></td>
</tr>
<tr>
<td>McCardle, William H., 188 n 50</td>
<td></td>
</tr>
<tr>
<td>McCready, Benjamin W., 7</td>
<td></td>
</tr>
<tr>
<td>McGowan, Jonas H., 77-79</td>
<td></td>
</tr>
<tr>
<td>McKenzie Conference, 108, 111</td>
<td></td>
</tr>
<tr>
<td>Macon Telegraph, 141</td>
<td></td>
</tr>
<tr>
<td>Maher, M.E., 215 n 32</td>
<td></td>
</tr>
<tr>
<td>Mahoney, Michael, 138, 142</td>
<td></td>
</tr>
<tr>
<td>malaria, 29, 30</td>
<td></td>
</tr>
<tr>
<td>malarial fever, 39, 40, 58, 163, 189 n 70</td>
<td></td>
</tr>
<tr>
<td>Mansfield, Rev. Mr., 48</td>
<td></td>
</tr>
<tr>
<td>Marks, Albert S., 106, 108, 112</td>
<td></td>
</tr>
<tr>
<td>Marshall, Elizabeth, 39, 185 n 7</td>
<td></td>
</tr>
<tr>
<td>Martin, Joseph H., 213 n 9</td>
<td></td>
</tr>
<tr>
<td>Masons, 52</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Registration Acts of 1842, 8</td>
<td></td>
</tr>
</tbody>
</table>
Massachusetts State Board of
Health, 12
Matamoros, Mexico, 121
Matthews, Stanley, 76, 77, 193 n 51
measles, 29
medical profession: role in sanitary reform, 3-4, 7-8, 12, 35, 87; as victims of yellow fever, 43, 48, 50
Memphis and Charleston Railroad, 15, 122
Memphis Cotton Exchange, 119, 153, 207 n 28
Memphis Daily Appeal, 41, 42, 43, 57, 61, 105, 109, 110, 111, 115, 117, 119, 120, 122
Memphis Daily Avalanche, 107, 108, 110, 111, 120, 121, 122
Memphis Howard Association. See Howard Associations: of Memphis
Memphis Medical Society, 33
Memphis Sunday Avalanche, 123
Memphis Water Company, 29, 113, 115-17
meningitis, 30, 163
Menken and Company (Memphis), 122
Meriwether, Minor, 205 n 4
Meriwether, Niles, 114, 117
Merrill, Dr. Ayres P., 35
Metropolitan Association for Improving the Dwellings of the Industrious Classes (Great Britain), 170 n 20
Metropolitan Health Act of 1866 (New York City), 11, 12
miasma, 4
Milwaukee, Wisconsin, 166
Mississippi Quarantine Station, 38-39, 65
Mississippi Valley Medical Monthly, 121
Mitchell, Dr. Robert W., 41, 48, 50, 59, 108, 193 n 53
Moral and Physical Condition of the Working Classes of Manchester, The (Kay), 4
morality: and disease, 6, 7, 8, 66; and charity, 52
morbidity rates, 3
Morgan, Charles, 86
Morgan, John T., 188 n 50
Morse, Leopold, 193 n 52
mortality rates: registration of statistics about, 3; related to industrialization, 3; in Atlanta, 32-33, 129-30, 142, 145, 161-65; in Memphis, 32-33, 113, 161-65; in New Orleans, 32-33, 157, 161-65, 181 n 87
Mosher, Jacob S., 193 n 53
Mulbrandon, Frank, 107
Mullan, Fitzhugh, 62
Mutual Aid Brotherhood, 156
National Academy of Sciences, 78
National Board of Health (Great Britain), 5-6
National Board of Health (U.S.), 79-80, 99, 100, 108, 110, 111, 117, 118, 119, 126
National Municipal Reform League, 152
Newark, New Jersey, 166
Newman, Isidore, 97
New Orleans: situation for, 14; commercial growth of, 15-16, 17, 146-47; population of, 17-19, 157-58; social structure in, 19-23, 158-60; epidemics in, 21, 30, 37-59 passim, 69-70, 83-85, 88-89, 103, 121, 125, 126, 149, 166-67; slums in, 22; government and politics in, 23-25, 151-53; drainage of, 25, 27, 84, 87, 89-90, 92-93, 101-2, 159; site of, 25-26; flooding of, 26, 27, 91-93; sewer system in,
27, 84, 89-91, 101-2; street conditions in, 27-28, 42, 46, 84-85, 88, 93, 94, 200 n 38; garbage collection in, 28, 85, 87, 89, 93-95, 152; water supply for, 28-29, 85, 87, 89, 95-97, 164, 201 n 44; prevalence of disease in, 29-32; mortality rate of, 32-33, 157, 161-65, 181 n 87; board of health in, 34, 59, 164; public health in, 34-36, 146; quarantine in, 37-38, 56, 70-71, 74, 83-84, 100-101; public health education in, 97; compulsory vaccinations in, 98; industrial development in, 147-48

New Orleans Chamber of Commerce Committee on Quarantine, 70-71

New Orleans Daily Picayune, 37, 41, 56, 57, 59, 61, 88, 93, 96, 99, 147, 159-60

New Orleans Drainage and Sewerage Company, 91

New Orleans Draining and Paving Association, 102-3, 104

New Orleans Draining and Paving Commission, 103

New Orleans Educational Society, 97

New Orleans Howard Association. See Howard Associations: of New Orleans

New Orleans Medical and Surgical Association, 84, 87, 89, 101, 103, 104

New Orleans Medical and Surgical Journal, 40, 58, 87, 99

New Orleans Peabody Subsistence Association, 45, 52, 53, 58

New Orleans Sanitary Commission, 34, 35

New Orleans Times, 61

New Orleans Water Works Company, 28-29, 96

New York, New York, 163, 165

New York Academy of Medicine, 7, 11

New York Sanitary Association, 10, 11


Nicholls, Francis T., 61

Nicholson pavement, 105, 117

Nixon, J.O., 102

Norcross, Jonathan, 16

Nuttall, Dr. J.H., 182 n 93

Odd Fellows, 52

Olmsted, Frederick Law, 174 n 19

Olmsted, Dr. John C., 188 n 55

On the Influence of Trade, Professions, and Occupations in the United States, in the Production of Disease (McCready), 7

Orleans Parish Medical Society, 40

Overton, John, 14

Overton, John, Jr., 148, 205 n 8

Paddock, Algernon S., 193 n 51

Palmer, Rev. Benjamin Morgan, 197 n 7

Panic of 1873, 17, 24, 149

Parsons, Rev. Charles Carroll, 50

Patton, Dr. G. Farrar, 38-39

Patton, Isaac W., 86, 88

Peel, Sir Robert, 5

Pettit, J.T., 205 n 4

Philadelphia Board of Health, 10

Philadelphia Medical Times, 75

Philosophical Radicals, 6

physicians. See medical profession

Piedmont Exposition (Atlanta), 150, 151

Pinson, Dr. A.J., 53, 127

Plunket, Dr. James D., 107, 110

pneumonia, 29, 163

Poor Law Amendment Act of 1834 (Great Britain), 1

Poor Law Commission (Great Britain), 4


Porteous, Thomas C., 44, 46, 53

Porter, David T., 106-7, 112, 148, 153, 205 n 4

Porter, James D., 34

Port Gibson, Mississippi, 51, 65

prohibition, 155-56

Public Health Act of 1848 (Great Britain), 5-6

public health movement: and sanitary reform, 1-13 passim, 35-36; and education, 97

quarantine: in New Orleans, 37-38, 56, 70-71, 74, 83-84, 100-101; in Memphis, 41, 42, 48, 107-8, 110-11, 118-23

Quarantine Act of 1878, 37, 71, 72

Quarantine Act of 1879, 80, 119

Quijano, Dr. Francis, 189 n 70

Rabinowitz, Howard N., 146

race relations. See social structure and race relations
Randall, W.H., 193 n 53
Rawson, E.E., 213 n 9
refuse collection. See garbage collection
Reilly, Dr. Frank W., 112-13
Reinders, Robert C., 16
Relief Committee Louisiana Association
Army of Tennessee, 52
Report of a General Plan for the Promotion
of Public and Personal Health, 8
Report of the Council of Hygiene and Public
Health, 12
Report on an Inquiry into the Sanitary
Condition of the Labouring Population
of Great Britain (Poor Law Commis-
sion), 4
Republican party, 24, 25
Rice, Frank P., 213 n 11
Richards, William G., 143, 216 n 50
Rogers, William O., 97
Rosen, George, 1
Russell, James Michael, 150
St. Louis, Missouri, 43, 163
St. Tammany Waterworks Company, 96
Sanitary Condition of the Laboring Popula-
tion of New York, The (Griscom), 7
Sanitary Council of the Mississippi Valley,
99-100, 107, 119, 205-6 n 10
sanitary reform: in England, 1-6, 7; in
the U.S., 6-13, 35-36
Saunders, Dudley, 48
Sauves's Crevasse (1849), 26
Savannah, Georgia, 32, 34, 149
Savitt, Todd L., 161
scarlet fever, 29, 163
Schley, William, 14
Schmidt, William B., 86, 197 n 4
Schreiber, Adolphe, 86, 146
Schuppert, Dr. Moritz, 98
Select Committee on the Health of
Towns (Great Britain), 5
Senate Select Committee on Epidemic
Diseases, 73-74, 76
sewer systems, 7, 178 n 61; in Atlanta,
27, 137, 139-42; in Memphis, 27, 90,
112, 113-15; in New Orleans, 27, 84,
89-91, 101-2; Chesbrough, 89
Shakespeare, Joseph A., 91, 103, 151, 203
n 62, 204 n 74
Shattuck, Lemuel, 8-10, 123
Shelby County (Tennessee) Medical So-
ciety, 110
Shepard, Alexander R., 188 n 59
Sherman, Gen. William T., 62
Sigafoos, Robert A., 161
Simonds, John C., 35, 36
sin, disease as punishment for, 6, 8, 66
Slayton, W.F., 213 n 9
smallpox, 30, 33, 97-98, 128, 163
Smart, Capt. Charles, 207 n 31
Smith, Hoke, 156
Smith, James M., 34
Smith, Southwood, 4, 7, 35
Smith, Dr. Stephen, 11, 12, 79, 194 n 62
social structure and race relations: of
Atlanta, 19-23, 142-43; of Memphis,
19-23; of New Orleans, 19-23, 158-60
Society for the Improvement of the Con-
tdition of the Labouring Classes (Great
Britain), 170 n 20
Southern Medical Review, 35
Speers, Noah, Jr., 207 n 28
Spencer, Herbert, 94
street conditions, 7, 10; in Atlanta, 27-
28, 132-33, 134-39, 214 n 27; in Mem-
phis, 27-28, 105, 107, 108, 117-18; in
New Orleans, 27-28, 42, 46, 84-85, 88,
93, 94, 200 n 38
sulfur, 38
Sumner, William Graham, 144-45
Swearingen, R.M., 193 n 53
Taliaferro, Dr. Valentine H., 213 n 9
Taxing District of Shelby County. See
Memphis: government and politics in
Tax Payers' Association (New Orleans),
91, 103
Tennessee State Board of Health, 34, 107
Ten Years' War (Cuba), 38
Thackrah, C. Turner, 4, 7
Thompson, Elizabeth, 61, 66, 191 n 27
Thompson, Rev. Hugh Miller, 85, 94,
197 n 7
Thomsonian "steam" doctors, 7
Thornton, Dr. Gustavus Brown, 57, 106,
115, 119, 120, 121, 123
toilet facilities: lack of privies, 2; in New
York, 6; Rochedale plan for, 89, 132; privy
vault-cesspool system for, 198-99 n 20
Tompkins, Henry B., 213 n 11
Toner, Dr. Joseph M., 63, 64, 76, 78, 192
Touro Infirmary and Hebrew Benevolent Association, 52
tuberculosis, pulmonary. See consumption
Tucker, Rev. Henry H., 130, 213 n 9
Twain, Mark, 95, 147
typhoid fever, 29, 30, 140, 163, 164, 180
United States Constitution, 77
United States Marine Hospital Service, 61, 63, 65, 67, 71, 75, 77, 80-81
United States Public Health Service, 63
United States Sanitary Commission, 11, 190-91 n 25
utilitarianism, 3
vaccinations, compulsory: in New Orleans, 98
Veal, Thomas, 133, 134, 142
Venable, William H., 137
Vicksburg, Mississippi, 43, 51, 54, 65, 210 n 59
vidangeurs, 90, 91
vital statistics: registration of, 3, 9, 32; of Boston, 8; of Atlanta, 32-33, 129-30; of Memphis, 32-33; of New Orleans, 32-33; of Georgia, 34, 222 n 55; of Tennessee, 222 n 55
voluntary sanitary associations: formation of, 5; lack of in U.S., 10
volunteers. See voluntary sanitary associations

Wade, Richard C., 17
"Waiting for the Frost" (poem), 56
Wallace, Lymus, 154
Walthall, Maj. William T., 68
Waring, Col. George E., Jr., 90-91, 113-14, 207 n 31
Warmoth, Henry Clay, 25
Warner, Charles Dudley, 159
Warner, Margaret Ellen, 166
Washington, D.C., 166
Washington Post, 51, 60, 67, 68, 78
waste collection. See garbage collection
water supply: sewage contamination of, 2, 5, 6, 28, 113; for Atlanta, 28-29, 130-
31, 139, 140, 142-44, 216 n 51, 216-17 n 53; for Memphis, 28-29, 113, 115-17; for New Orleans, 28-29, 85, 87, 89, 95-97, 164, 201 n 44; public systems for, 208-9 n 45
Watkins, Dr. William H., 97, 98, 99
Watterson, Henry, 76
Western and Atlantic Railroad of the State of Georgia, 14
Westmoreland, Dr. John G., 53
Westview Cemetery Association (Atlanta), 130
Whig party, 23
White, Dr. Charles B., 74, 86-87, 97, 98
White, Dana E., 13, 165
Whitney, Charles A., 86, 197 n 4
Whittier, John Greenleaf, 188 n 62
whooping cough, 163
Wilson, B.J., 213 n 9
Winchester, James, 14
Wise, Dr. Julius, 206 n 13
Withers, Robert E., 76, 77
Woods, Charlie B., 40
Woodward, C. Vann, 99, 147, 151
Woodward, Thomas J., 197 n 4
Woodworth, Dr. John M., 61-68, 73-79, 80, 83, 188 n 59
World's Industrial and Cotton Centennial Exposition (New Orleans), 94-95, 99, 148
Wrenn, Lynnette B., 153, 154
Wright, Luke E., 148
yellow fever: colonial prevalence of, 6; epidemics of, 10, 22, 30, 31-32, 34, 35, 37-59 passim, 103, 121, 132, 139, 142, 145, 146, 149, 150, 166-67; resistance of blacks to, 31, 57, 59, 108; debate over etiology and prevention of, 35, 62, 63-65, 67-69, 73-75, 79, 80-82, 183 n 100; quarantine procedures for, 38, 70, 75, 84
Yellow Fever Commission, 63-65, 66-67, 73, 75, 80
Yellow Fever National Relief Commission, 54, 61
Young, H. Casey, 61, 77, 78-79, 80, 193 n 52
Young, James Harvey, 167
zinc sulfate, 111