INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again - beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeib Road
Ann Arbor, Michigan 48106
SPEER, James Brooks, Jr., 1949-
CONTAGION AND THE CONSTITUTION: PUBLIC HEALTH
IN THE TEXAS COASTAL REGION, 1836-1909.

Rice University, Ph.D., 1974
History, modern

University Microfilms, A XEROX Company, Ann Arbor, Michigan

© Copyright
James Brooks Speer, Jr.
1974

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.
RICE UNIVERSITY

Contagion and the Constitution
Public Health in the Texas Coastal Region
1836-1909

by

James Brooks Speer, Jr.

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

Doctor of Philosophy

Thesis Director's Signature

James M. Hopman

Houston, Texas
May, 1974
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. PERCEPTIONS AND REALITIES</td>
<td>16</td>
</tr>
<tr>
<td>III. PESTILENCE AND PROGRESS</td>
<td>32</td>
</tr>
<tr>
<td>IV. MOSQUITOES AND MEDICINE MEN</td>
<td>45</td>
</tr>
<tr>
<td>V. A POWERFUL LEGACY</td>
<td>59</td>
</tr>
<tr>
<td>VI. IN DEVOTION TO INTERESTS OF THE PROFESSION</td>
<td>81</td>
</tr>
<tr>
<td>VII. CONCLUSION</td>
<td>96</td>
</tr>
<tr>
<td>FOOTNOTES</td>
<td>108</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>144</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

I am grateful to have had an opportunity to attend Rice University. Many people have lent generous assistance and steady encouragement to my completion of this study.

I owe much, personally and professionally, to Dr. Harold M. Hyman, my thesis director. His guidance has greatly enhanced the usefulness of my work. Special thanks are due also to the other members of my committee – Dr. Albert Van Helden and Mr. C. M. Hudspeth – for their kind contributions of comment and criticism.

Archivists, librarians, and staff at Fondren Library, the Texas State Library and Archives Division, the University of Texas Archives, Jesse H. Jones Medical Library, and Rosenberg Library swiftly and courteously attended to my research needs. Ms. Carole S. Speranza cheerfully and skillfully typed the manuscript.

I thank most of all my wife, Donna, and my children, Vanessa and Nathan, for their patience and understanding, and my parents, to whom this study is affectionately dedicated, for their unfailing love and support.

Houston, Texas

J.B.S.
INTRODUCTION

On the sixth of April, 1878, Father Ramon DeCordova, a Catholic priest accompanying a trading party in the upper basin of the Amazon river, recorded in his journal a peculiar occurrence. "I am deeply disturbed," he wrote, "by the eerie stillness that has come over the forest. For the last many days our company has made its way up the great river amidst the clamor of large bands of monkeys.... I have noticed since yesterday, however, a diminution of them. Now they seem all to be dead, victims of some fiendish malady that has strewn the river banks with their lifeless bodies. Their shrieks and cries are heard no more by us.... The heavy air of perpetual summer remains undisturbed... save for the ceaseless drone of swarms of mosquitoes. A profound melancholy has settled over the crew and I think it well that we are leaving this day such a place and its death-like silence." Ten days later, DeCordova and members of the trading party reached their base at the mouth of the Amazon and departed immediately for Caribbean ports. DeCordova's last journal entry, made aboard ship, contains repeated and somewhat hysterical references to the mysterious disappearance of the howler monkeys. Legible portions of the last sentences he wrote before dying of yellow fever cry out that "...[it] is those monkeys....[i]t is those wretched beasts who have sent this curse of pestilence to me....[T]hose creatures have caused it all!!"¹

Accurate though DeCordova's accusations were as to the indirect source of his affliction, he could not have known the terrible consequences his travel and that of his companions would have. For by feeding on the infected passengers, mosquitoes bred from the ship's water casks became infected themselves. Members
of the ship's crew subsequently infected by these mosquitoes served as carriers of
the virus to ports of call, triggering an epidemic that swept the western hemisphere
from Quebec to Tierra Del Fuego. Striking in trip hammer succession at an ever-
widening circle of ports and island cities, the infection spread along trade routes
through the Caribbean and Gulf of Mexico. Within weeks tentacles of contagion
were reaching up the watercourses on two continents. Father DeCordova was the
first victim of Yellow Jack's last great campaign of the nineteenth century. After
eight months had passed the priest would be joined by 500,000 more.²

Although not as convincingly documented as circumstances which led to the
1878 epidemic, invasions of yellow fever endured by cities and towns in the Texas
coastal region stemmed from the same tropical source and followed the same basic
pattern. Ships from Havana, Vera Cruz, Tampico, and New Orleans called regu-
larly at Texas ports with goods vital to a burgeoning economy. In twenty-two of
the years from 1839 to 1905,³ however, vessels from these same ports brought an
unwelcome, though not entirely unexpected guest.

Rumors of yellow fever spread panic and disrupted commerce in the Texas
coastal plain throughout the nineteenth century. The disease itself claimed thou-
sands of lives and blighted many thousands more. Of greater long-term significance
than the number of lives lost or the immediate personal suffering, though, was the
disease's yearly threat to the coast—a threat which affected the course of the
area's economic expansion, influenced the pattern of urban growth in the region,
and dictated to a great extent the character and evolution of ordinances, laws,
and institutions designed to protect the public health. Unfortunately, since the
role of mosquitoes as the transmitting vectors for the disease was not recognized,
the real effect of health policies on the incidence of yellow fever was often slight and always indirect. Yet however futile or even ludicrous their efforts at sanitation and quarantine may seem in retrospect, contemporaries undertook them with the high seriousness of men whose lives were at stake. By time of the 1878 epidemic, citizens of urban communities of the Texas coastal region had long since come to think of public health measures in just those terms. Review of the response of municipal authorities to public health crises, the difficulties they faced, the policies they adopted, and the repercussions from those policies reveals important configurations of the inter-action of national, state, and local health problems. Moreover, such analysis illustrates the profound effects of health emergencies on contemporary constitutional and legal understandings.

In preparation for an address to the International Medical Congress in 1876, Henry Ingersoll Bowditch, a leading advocate of health and sanitary reform in Massachusetts, sent circulars to physicians across the country, requesting information on matters of public hygiene. Published the following year with an expanded version of his centennial address, the results of this survey led Bowditch to conclude that while public and professional support for sanitary reform was increasing, and while encouraging progress had been made in some areas, no state had yet assumed full and proper responsibility for the health and welfare of its citizens. Apart from conclusions drawn from answers to the circular, however, the questions it asked are significant as reflections of the emphasis that Bowditch and other reformers of his time placed on constitutional and legal aspects of public health administration.

More than a third of the survey's twenty questions invited comment on the character and capacities of legal processes, the opportunities they afforded, and the obstacles
they posed to the development of effective state and municipal programs of preventive medicine. ⁴

This nineteenth-century interest in the law, unfortunately, has not been carried over into twentieth-century scholarship on public health in the United States. The growth of public health programs on the national level and in particular states and cities, the major epidemic diseases, their impact on individual communities, the contributions of a rising medical profession, advances in medical science, and the lives and careers of principal health advocates have all been carefully and profitably studied. ⁵ Little attention has been devoted to the constitutional dimensions of health and sanitary reforms, or to the legal instruments through which such measures were executed. ⁶

Twenty years ago, Benjamin Spector, noted historian of medicine, pointed out that "any development in the history of medicine which affects the health of peoples must have its counterpart in the law." ⁷ Historians of American law, however, have not yet explored these interrelationships. As James Willard Hurst has recently written, legal historians have not broadened the scope of their inquiries to the range of the uses of the law. With honorable and important exceptions, the literature has focused too much on courts, especially on high federal courts, exaggerating the contribution of judge-made constitutional law to the social structure, and giving inadequate consideration to the substantive content of governmental programs. ⁸ Virtually nothing has been written about the influence of private litigation and constitutional law on the public's health, or about the role of law in the translation of medical science into public policy during the nineteenth century.

The response of Southern cities to threats of epidemic disease invites con-
sideration of this interaction of law and public health. As Bowditch in 1876 and as historians since that time have observed, rumors and ravages of epidemic disease stimulated the appearance and determined the configurations of health and sanitary programs of cities in the South. The sword of pestilence which decimated populations, panicked entire regions, and confounded the crude science of a fledgling medical profession also sent shock waves through a largely unstructured, institutionless society, and forced urban communities to parry with innovative applications of delegated state police powers.

State police powers have been pre-eminently important in the development of American constitutionalism. With roots in colonial times and given further development and refinement by nineteenth-century jurists such as Lemuel Shaw, John Bannister Gibson, and Isaac Redfield, this notion of authority inherent in the sovereign powers of government has as its essence the constitutional adequacy of state interventions to promote the order, safety, health, morals, and general welfare of society. Nineteenth-century lawyers and judges were keenly aware of the wide latitude of interpretation permitted within such broad terms. As Lemuel Shaw noted in 1851, "it is much easier to perceive and realize the existence and the sources of this [police] power than to mark its boundaries, and prescribe the limits to its exercise." Judicial and professional uncertainty concerning the proper range of state monitorship was reflected in the sharp differences that obtained between state police power theory and practice. In theory, state police powers were plenary, and so all-encompassing as to defy precise definition. In practice, however, almost all states remained dedicated to doing as little as possible. With a few important exceptions, such as common school support, levee maintenance,
canal and railroad projects, and, in the ante-bellum South, slave control, most states did not use their immense theoretical reserves of constitutional power to interfere with functions of the marketplace or with the lives of their citizens. Public health illustrates this contrast of towering authority and low-profile involvement.

During the early decades of the nineteenth century, state governments avoided the assumption of their basic police power responsibilities for public health that constitutional law maintained was always theirs. It was only in the crisis atmosphere generated by spectacular and overwhelming epidemics that matters of health and sanitation received popular and official attention. At other times, questions concerning the disposal of human and animal wastes, drainage, and the quarantining of diseased persons were deemed inappropriate topics for polite or social discussion. To public-spirited physicians and health reformers, prospects seemed dim for the realization of Benjamin Rush's dream of a "...time when our courts of law shall punish cities and villages for permitting any of the sources of bilious and malignant fevers to exist within their jurisdiction[s]." Without the impetus to action provided by epidemics, the constraining mechanisms of dual federalism made progress toward public health reform tragically slow.

That the Constitution had not assigned to the new federal government responsibilities for the people's welfare reflected strong convictions of the time that the states should and would provide for their citizens' well-being as each thought was necessary and proper. Contrary to these expectations of the Founding Fathers, however, the states did not meet these fundamental obligations. "On this score," as one scholar has remarked, "the Constitution's framers, who had assumed that federalism allowed alternatives to national action not available abroad, struck out."
Upon beliefs that health and anti-contagion responsibilities belonged to local areas where problems actually existed, early Congresses sought no more role than to enforce the state's system-less policies on quarantine.

As Congress did practically nothing in the public health arena, states, reasoning that local, temporary emergencies required only local, temporary action, did scarcely more. Responsibility for matters of health maintenance and protection, reserved to the states by the Constitution, were in turn passed on by the states to counties and municipal corporations. These transfers of authority were accomplished in a variety of ways. Express legislation provided for the delegation of police power responsibilities to lower levels of government in some states. A representative statute is one passed by the Tennessee legislature in 1849. "Municipal corporations," it said, "have full power and authority to enact laws and ordinances necessary and proper to preserve health, quiet, and good order of town, and to prevent and remove nuisances." In other states such provisions were included in city charters, or as was more common, police powers were implicitly delegated through the broad language of general welfare clauses of state constitutions. Yet whatever the technical means, the results were uniform. In the early decades of the nineteenth century, cities and counties were given the authority, though not the budget and personnel, to solve problems of health and sanitation.

In one sense, the reluctance of states to involve themselves in health programs was a serious abdication of their responsibilities. For without the administrative and financial assistance of state governments, cities and counties found it nearly impossible to cope with problems of sanitation and disease. And without the centralized control from the state level, health measures of local governments lacked
direction and were often seasonal, haphazard policies which worked at cross-
purposes to one another. At the same time, however, the inactivity of state govern-
ments in health concerns was an accurate reflection of the attitudes and wishes of
many citizens. Filth, squalor and disease were commonly associated with city life.
And representatives of predominately rural populations were quite willing to let
cities fend for themselves. More than any nascent anti-urban prejudice, however,
the unstructured nature of American society and the low velocity of government at
all levels explain opposition to concerted, long-term official interference in private
affairs. As Oscar and Mary Handlin have noted of the ante bellum decades,
"Important spheres of social action...left...to voluntary associations without the
capacity for coercion." State governments had no inclination and received little
encouragement to set up expensive machineries to guard the public's health.\17

In these early decades of the century, unfortunately, cities, especially those
in the South, did little more than the states. Since the only concern which trans-
lated itself into concrete governmental programs of quarantine and sanitation
stemmed from fears of epidemic disease, the institutional development of public
health in these cities assumed a spasmodic, seasonal rhythm. During the dangerous
late summer and early autumn months, when yellow fever was common, urban
residents in the South energetically supported ordinances which provided for quar-
antines and for the cleansing of streets, gutters, and privies. After the "sickly
season;" the public quickly turned to other pursuits, rotting heaps of excrement
and trash again piled high, and municipal agencies authorized by delegated state
police powers to deal with actual or threatened emergencies lapsed into inactivity.
With the approach of the next fever season, editorial jeremiads would appear, and
the inefficient, cumbersome process of re-creating, refunding, and restaffing
defunct governmental bodies would be repeated. For decades, this wasteful cycle
made for little progress, either in the sanitary condition or in the institutional
machinery of health protection in the region's cities. By the 1870's, however, as
the severity of health problems increased in direct, if not geometrical ratio to the
swift rate of population growth, municipal officers came gradually to realize that
they could not adequately clean their streets, collect their garbage, or protect their
cities from crushing epidemics with seasonal campaigns of the sort of spontaneous
voluntarism that had constructed cabins along the frontier. The greatest threats to
life and health, of course, continued to be grimly efficient killers such as measles,
whooping cough, tuberculosis, enteric disorders, scarlet fever, typhoid, and
diphtheria. But it was epidemic disease that spurred governments to action, and it
was upon these medical imperatives that cities responded with measures that
approached, and in some cases exceeded, constitutional theory about the plenitude
of states' police powers. 18

New Orleans offers dramatic illustration of this impact of epidemic disease.
From the time of the city's founding in 1718, problems of sanitation and disease
grew apace with rapid increases in population. Beginning in the 1830's, however,
the effects of malaria, pneumonia, consumption, and enteric diseases began to be
overshadowed by spectacular epidemics of Asiatic cholera and yellow fever. 19
From a population of approximately 50,000 there were nearly 10,000 deaths from
both diseases during 1832 and 1833. From 1846 to 1867, the city lost at least
12,000 of its residents to cholera. But as John Duffy, Jo Ann Carrigan, John Ellis,
and others have pointed out, it was yellow fever that so profoundly affected the
the tone of community life and made the name of New Orleans synonymous with sickness and death throughout the nineteenth century. After the city's first yellow fever epidemic in 1796 until the 1840's, there were irregular outbreaks of increasing severity. Then, in the 1850's, yellow fever epidemics reached unprecedented scale. During this decade alone, there were more than 20,000 deaths from yellow fever in New Orleans. The worst attack, in 1853, prompted creation of the nation's first state board of health. Gordon Gillson, the closest student of the institution, notes that before 1855, when the state board came into existence, municipal boards of health had under police power authorizations operated in New Orleans, but without much success or noticeable effect on miserable sanitary conditions. In 1854, Edward H. Barton, one of the city's most prominent physicians, assessed the efforts of past boards of health and declared that their feeble programs had not altered the fact that "New Orleans is one of the dirtiest, and with other conjoint causes, is consequently the sickliest city in the Union...." The state board of health had no immediate positive effect on these conditions or resulting high mortality rates. Yet the state board is nonetheless of central significance to comparative review of the uses of delegated state police powers. For the state board, even though it was closely linked to the city government, and while it devoted its primary energies to the enforcement of quarantine policies, effectively blocked further delegations of police powers to the city of New Orleans. There were, therefore, limited opportunities for innovation or for extraordinary uses of police powers.

However ineffective itself, the state board of health served as a legal impediment, and constrained the range of options available to the municipal govern-
ment in its application of police powers to health concerns. While the pressure from epidemic disease was tremendous, the state board of health acted, in law, as something of an institutional buffer between, on the one hand, possibilities for action offered by the state's authority and, on the other, uses of police powers over and above traditional functions of property inspection, scavenger operations, and nuisance abatement. Apart from exceptional practices adopted during the period of federal occupation in the Civil War, New Orleans made no pioneering advances in legal aspects of public health administration. By the 1870's, in a series of decisions on health programs in New Orleans, state courts in Louisiana had developed a conservative formulation of permissible ranges of activity for municipal health officers. The theory of broad police powers remained undisturbed, but the intervention of the state into public health matters had, in these courts' opinions, limited the options of the municipal corporation, since delegations of state authority to it were limited. 23

In contrast to epidemiological pressures that obtained in New Orleans, Atlanta was relatively free of cholera and yellow fever. After its creation by the Georgia legislature in 1836, Atlanta grew by the 1870's to a population of nearly 20,000. Poverty, filth, and disease were serious problems in Atlanta, before and after the Civil War, and these problems increased with population growth. But Atlanta never suffered the devastating, city-wide epidemics of cholera and yellow fever to which river and coastal towns were subjected, and in fact prospered commercially in direct proportion to the extent that other cities in the region became increasingly plague-stricken. 24 Without the impetus provided by these epidemics, Atlanta's boards of health were barely able to muster support for even limited programs, and the institutions themselves remained ineffective and part-time. As
Richard J. Hopkins has observed, the city's boards of health, acting under authorizations of state police power grants, were never menaces, either to insanitary conditions or to the traditional supine posture of the municipal government. State courts in Georgia, as in Louisiana, kept to narrow constructions of the alternatives open for the city under police power delegations in matters of health maintenance and protection. Fears inspired by the 1878 yellow fever epidemic which swept the Mississippi Valley led to an expanded role for Atlanta's board of health, but these more vigorous activities had no effects on the horizons of police power utilization, and stemmed more from the enforcement of existing ordinances than from innovations.

The 1878 yellow fever epidemic was also a turning-point in the development of public health in Memphis. The manner in which the city applied police powers delegated to it by state, however, changed little. From the time that business associates of Andrew Jackson laid out the city in 1819, until the calamity of 1878, municipal governments of Memphis did not deviate from seasonal patterns of inadequate health protection. By the late 1870's, the population of Memphis had nearly reached 40,000. This swift growth was accompanied, of course, by steadily worsening health and sanitary conditions. As one city newspaper complained in 1873:

We have no system of sewerage in Memphis, and the necessary consequences is that the filth of the city is left to take care of itself. Our sanitary police consists, for the most part, of some half-dozen of the chain gang, who occasionally do little more than emancipate the confined odors of the kennels of Main Street, and give wings to imprisoned effluvia. Our alleys and obscure streets are left to the rag-pickers, to porcine and canine scavengers, to cleanse them of their superfluous foulness; and, were it not for the rain of pitying
heaven, would of themselves give abundant employment to our undertakers and grave-diggers. And yet these are the least of the objectionable features touching the violation of the laws of hygiene....Nearly every family in the city is dependent upon a cistern for its supply of water; nearly every cistern is in the same yard, in close proximity to, and generally in a direct geometrical line with, the privy.

Yet these conditions, even though aggravated by a series of major epidemics of cholera and yellow fever dating from 1832, failed to elicit an imaginative response from the city. The pressure from epidemics, though intense, was apparently not intense enough. Vast potentials for action and innovation permitted within wholesale police power delegations were not realized. Even during the crisis of 1878, the Memphis board of health seemed unwilling to call to force the whole range of theoretical powers they possessed.  

Charles C. Parsons, a physician from Galveston who came to Memphis to help during the epidemic, remarked on this reluctance. "It had been my understanding," he said, "that city authorities...had great powers and freedom to enforce...any necessary measure. But I am struck that the city [officials] are every worrying about possible illegalities of their operation....I believe that these officials have taken too much to heart Crockett's [sic] motto...['Be sure you're right, then go ahead.'] What contrast it is to officials [in Galveston] who would, as I know them under similar circumstances, act first and fret afterwards about consequences that might come from improper or illegal policies."  

Dr. Parsons had ample justification for his comparison of the responses of Memphis and Galveston. Galveston's experiences with yellow fever had long since convinced city authorities that desperate situations merited desperate actions. In
the period from 1839 to 1873, serious yellow fever epidemics struck Galveston seventeen times. The constitutional ramifications of these tremendous epidemiological pressures were heightened by failure of the state government to become involved. Delegations of police powers to municipal corporations in Texas for matters of health protection were virtually absolute. Under similar pressures from ravages of epidemic disease, Louisiana created its state board of health in 1855, Georgia in 1875, and Tennessee in 1877. Texas, however, did not establish a state board of health until 1909. Throughout the nineteenth century, Texas coastal cities faced increasingly serious threats from epidemic disease without constraints from the state government. Delegated state police powers supplied the means, epidemics provided the motivation; and in conjunction with these forces produced results that were, even by contemporary legal standards, astonishing. Public health machineries in Brownsville, Galveston, Houston, and other Texas coastal cities were unstable and, like those of New Orleans, Atlanta, and Memphis, failed to cope adequately with the larger dimensions of urban health crises. The key point of differentiation, however, is that epidemiological pressures in Texas coastal cities were so powerful as to overcome constitutional inhibitions about the role and range of powers of municipal corporations. With turn-of-the-century discovery of the mosquito's role in spreading yellow fever, of course, the crisis atmosphere generated by epidemics largely disappeared. At this time, the state government began to respond to organized medicine's pleas for an active health agency, yellow fever posed merely technical questions regarding eradication of Aedes aegypti. Yet before these victories were won, formulation and implementation of municipal health policies irrevocably altered legal, social, and economic configurations of the
region. Yellow Jack left a powerful legacy. Lessons learned and constitutional
tools discovered and developed during his ravages were neither forgotten nor
abandoned. Delegated state police powers found use in a broad range of problems
concerning reform and social control in burgeoning urban environments. By 1905,
date of the last major yellow fever outbreak in the state, the preambulatory phrase
"To Promote the General Welfare..." assumed in Texas coastal cities meaning and
significance far beyond the immediate context of epidemic disease.
PERCEPTIONS AND REALITIES

Aldous Huxley, though best known as a novelist, has been a prolific miscellaneous writer. As an essayist, Huxley is at his best in "Wordsworth in the Tropics," written in 1929. Beginning with a witty exercise in debunkery, Huxley emerges to broad consideration of social and intellectual responses to environmental conditions. As philosophy, Huxley's analysis of various shelters from the "jungle of immediately apprehended reality" provides insight on nineteenth-century perceptions of the relationship of climate, health and disease. As irreverent criticism of Wordworthian adoration of Nature's divine capacity for moral uplift and physical rejuvenation, Huxley's essay is welcome antidote for footnoted paeans to the uniquely and uniformly salubrious climate of Texas.

Huxley holds up to ridicule the serenity and joy derived by Wordworthians from communion with fields, waters, woodlands and hills. In well-gardened Europe and along the shores of Windermere and Rydal, the Romantic might feel secure in beliefs that "a walk in the country is the equivalent of going to church, [or]...as good as a pilgrimage to Jerusalem." However,

The Wordworthian who exports this pantheistic worship of Nature to the tropics is liable to have his religious convictions somewhat rudely disturbed. Nature under a vertical sun, and nourished by the equatorial rains, is not at all that chaste, mild deity who presides over the gemülichkeit, the prettiness, the cosy sublimities of the Lake District. The worst that Wordsworth's goddess ever did to him was to make him hear

'Low breathings coming after me and sounds
Of undistinguishable motions, steps
Almost as silent as the turf they trod;'

16.
He seems to have imagined that this was the worst nature could do. A few weeks in Malaya or Borneo would have undeceived him....[He would not have] felt so certain,...among the leeches and the malevolently tangled rattans, of the divinely Anglican character of [Nature's intellectually discovered,] fundamental unity.

"To us who live beneath a temperate sky and in the age of Henry Ford," Huxley adds, "the worship of Nature comes almost naturally.

...For us, the notion 'river' implies (how obviously!) the notion 'bridge'. When we think of plain, we think of agriculture, towns, and good roads. The corollary...of swamps [is] an embankment; of distance a railway. At latitude zero, however, the obvious is not the same as with us. Rivers imply wading, swimming, alligators. Plains mean swamps, forests, fevers....To travel is to hack one's way laboriously through a tangled, prickly, and venomous darkness. 'God made the country,' said Cowper. In New Guinea he would have had his doubts; he would have longed for the man-made town."

Huxley's barbs are not appropos because of strained parallels that may be drawn between the lower Brazos and the Congo, or between the Texas Hill Country and the English Lake District. Rather, Huxley's sarcastic observations serve usefully to underscore the failure of Texas historians to recognize the difference between, and to assess the contemporary significance of, actual and perceived influences of climate on health.

Billy M. Jones, author of the only monographic treatment of health and disease in Texas, contributes significantly to understanding of the social and demographic effects of nineteenth-century climatological theory. In Health-Seekers in the Southwest, 1817-1900, Jones identifies the silent menace of poor health and disease as the greatest obstruction to settlement of the trans-Appalachian frontier.
From the earliest period of immigration, health, or the lack of it, was a prominent pioneer concern. As the Mississippi Valley's reputation for unhealthfulness became both widespread and justified, health became an important factor weighed against the powerful appeal of new land. During the early nineteenth century, the notion that elevation promoted best health gained wide acceptance. Yet, as Jones points out, elevation had its limitations:

...for a partial elevation of ground in an unhealthy district...[commonly] proved to be more pernicious than the lower ground around it....[Men sought to avoid] contaminated air...not...'sufficiently diluted with atmosphere' of the higher region. The remedy was to withdraw a greater distance from the source of contagion, preferably into the higher country. Thus, a change of location eventually came to be recognized as the best prescription in remedial as well as preventive medicine.²

By 1820 this trend in the continuing waves of western emigration was well established. The attractiveness of lands beyond the Mississippi "Valley of Tombs" was determined not only by fresh soils but by their freedom from endemic Valley sicknesses. The quest for healthy locations, and for health itself, became important factors in determining population movement.³

Inabilities of formal medicine encouraged physicians as well as pioneers to place reliance upon change of residence and travel as a means of relieving illness or of escaping an infected location. Consequently, "...nineteenth-century medicine bowed...at the feet of Nature, the god of the Enlightenment, but in so doing...discovered a shrine around which physicians everywhere could unite. Travel for health came the panacea which early medicine could not supply, and with increasing gusto the medical fraternity endorsed the practice and accepted
nature as a full partner in the art of healing."\textsuperscript{4}

Before the Civil War, thousands of sick men climbed out of their "valley of frustration" to seek and occasionally to find health in the plains and mountains. At the same time, however, "those who helped promote a legend of perfect health in the West all too frequently ignored the grim realities of numerous poorly marked graves and many casually recorded deaths. Like the clairvoyant physician, the West's reputation was built only upon successes; the restoration of a single invalid was enough to obscure a hundred failures." Yet when medical authorities of international reputation endorsed climatic therapy with increasing enthusiasm, others found it easier to accept the premise of a disease-free and health-restoring environment in the western prairies and mountains. After the Civil War, overcrowded slums of eastern industrial cities joined the Mississippi Valley as a major contributor to the army of "walking death" which trekked westward at every opportunity. For those suffering from tuberculosis, climate alone seemed to be effective remedy. While throughout the nineteenth century the failure of formal medicine strengthened the faith of health-seekers in the physical rewards of a suitable climate, and while they continually sought relief for a variety of afflictions, the "white plague" accounted for at least 80 per cent of all invalid immigration.\textsuperscript{5}

With discovery of the tubercule bacillus in 1882 by German scientist Robert Koch, however, climatotherapy encountered serious criticism. Although clinicians would search fruitlessly for decades for an agent to end the germ's parasitic existence in the human body, the once respected field of climatology soon became relegated to the realm of pseudo-science. By 1900, as Koch's tiny bacillus cast Garganuan shadows of fear over the southwestern health frontier, the "golden age
of invalidism" was coming to an end. "Once treated everywhere with humanitarian respect as the pitiable victim of an epidemic environment, [the pulmonary invalid] was now coldly rejected as the unwelcome bearer of a lecherous bacteria." Subtlety was not a characteristic of this drastic shift in public sentiment.

One author suggested that consumptives be made to wear bells around their necks; ... another warned that tuberculars must be prevented from spitting in public places since this was 'the chief means of spreading infection.' Most damning of all, however, was the injurious, but medically feasible, comparison of the nineteenth-century lunger with the ancient leper, an analogy which found frequent expression among physicians who regarded complete isolation as the safest method of controlling both diseases. Such a conclusion inherently identified the chief casualty in the transition to bacteriological science -- climate no longer was considered the major factor in controlling tuberculosis. Though never totally discounted as a remedial agent, climate none-theless came to be regarded as nothing better than a valuable adjuvant.6

Jones' study added important new dimensions to the literature on American social and medical history. His solid arguments can be applied to nineteenth-century Texas, however, only on narrow, carefully defined points. In his article on "Health Seekers in Early Anglo-American Texas," unfortunately, Jones does not observe such distinctions. Much of the eastern half of Texas (which, during the nineteenth century, contained more than three-quarters of the state's population), lies within the greater Mississippi Basin, the same area Jones takes particular care in vividly characterizing as a "valley of frustration" that struck back at intruders with a "plethora of deadly infections" and an "annual sickly season ... during which diseases raged almost unchecked and at near epidemic stages." Contemporary
accounts selected as evidence for this characterization describe Illinois as a "virtual
graveyard," Indiana as a place "where they have the ague so bad that it shakes the
feathers off all the chickens," and, with more accuracy, New Orleans as site of
perennial attacks of epidemic disease. Yet Jones persistently refers to "sunny Texas,"
as if the state, or at least its most heavily populated areas, were not liable to the
same ills. The utility of Jones' account of the "substantial number of nearly-doomed
lungers, who coughed and hacked their way into the state ... to make permanent
contributions to its history and culture" is seriously diminished, therefore, by failure
to consider social implications of the fact that thousands who came seeking a
healthier climate were rudely and fatally disappointed. To describe the climate of
Texas generally as a powerful magnet for nineteenth-century health-seekers is one
thing; to portray the state, without distinction as to region, as an actual health
mecca is quite another. Jones' review is soundest when restricted to consumptives in
Big Bend resorts and Hill Country sanitariums after the 1880s. But it begins to be
dubious when applied to earlier periods and when carelessly extended in geographical
and pathological terms -- whether west of the Mississippi or east of the Rio Grande,
cancer, diphtheria, syphilis, typhoid fever, measles, whooping cough, lock-jaw,
scarlet fever, and poliomyelitis are consistently formidable. When Jones inter-
changes as evidence German immigrants passing through the coastal region in the
1840s with well-heeled tourists flocking to Mineral Wells seventy years later, his
argument becomes frankly ridiculous.

The important, though hardly profound point, of course, is one fully recog-
nized by Jones in his book-length analysis and wholly ignored in his specific study of
Texas: circumstances of man's secondary environment count fully as much in deter-
minations of relative healthfulness as factors of climate and geography. Apart from polar or equatorial extremes, and excepting animate threats such as certain bacilli and insect vectors of disease-causing viruses, the health or susceptibility to disease of inhabitants of any particular area depends more upon diet, personal hygiene, and conditions of housing and sanitation than upon latitude, elevation, and patterns of temperature and rainfall. Yet while either neglected altogether in the survey literature, or distorted into caricature in topical studies, nineteenth-century perceptions of the effects of climate on health, and of the relative salubrity of various regions, are highly important to an understanding of social responses to disease and public health emergencies.

To be sure, Jones' anthem on the healthfulness of the Texas climate is backed by a great deal of contemporary evidence. In 1829, Stephen F. Austin, responding to anxious inquiries from Ohio, Tennessee, Missouri, Arkansas, and Mississippi, wrote:

The climate of Texas I deem to be decidedly superior in point of health ... to any portion of North America in the same parallel. ... I think that the practical experience of seven years justifies me in saying that the rivers of Texas are less liable to diseases than any river of the U.S. below latitude 36.

Such sentiments form important theme throughout Austin's writings. Describing Texas in 1828, Austin noted the climate as being "mild and healthy;" in 1831, in this "most desirable part of North America," the climate had become "diversified, salubrious, and pleasant." Reassuring prospective colonists in 1833, Austin declared that "Experience has clearly proved ... that white men can labor in Texas as well and as safely to the health as anywhere else."10 As Jones points out, Austin's views
were echoed by many American and European visitors. David B. Edwards noted in 1836 that

In Texas, from river to river, we have an opening ascending country, wherein a swamp or putrid pond is not to be found; with ... breezes, as invigorating to the frame, as they are to the spirits. In Louisiana and Mississippi, from river to river, ... [there are] compact woods and a level country, wherein are to be found many a large swamp and stagnant pool, creating a miasmatic matter, not only disagreeable to the feelings, but deadly in its effects. While, therefore, the south midsummer air of these states is encumbered with moisture and surcharged with noxious miasma, bringing sickness and death, the pure atmosphere of Texas is renewed and refreshed by lively breezes, rolling over its dry, verdant, and waving surface, imparting health and vigor to all that inhale them. 11

In 1848, Prince Carl of Solms-Braunfels, an active and highly successful proponent of German immigration, disputed claims that Texas had not been previously colonized because of its unhealthy climate.

It can be safely decided that Texas possesses a healthy climate. The strong northers ... purify the air. Considering the peculiarity of Texas, that the prairies and the woods are interchanging, which gives the breeze a better chance to sweep over the surface of the country, one must admit that requirements for a healthy climate are present. 12

The state's newspapers regularly produced for the consumption of prospective newcomers feature articles on the unparalleled salubrity of their areas. Such generous appraisals of the state's climate commonly remarked on the plight of physicians compelled to resort to other callings in order to gain a livelihood. 13 John H. Brown, describing Bell County in the central portion of the state for the Galveston
News' Texas Almanac for 1858, took a new approach by linking obesity and health:

For health, Bell is unsurpassed in this or any other State; and upon the whole, has the highest claims to the favorable consideration of newcomers. We challenge our sister counties to show twelve larger men than Bell can boast, one of whom goes to three hundred and thirty pounds. 14

Aside from the accounts of immigration agents, land promoters, and local boosters, however, more objective opinions as to the healthfulness of the Texas climate depended largely on time and place. In 1836, an Englishman considered October and November as the best time of the year for a stranger to visit. "April and May," he said, "are the next best, so as to avoid not only the rapid changes, but the extreme heat of the weather [...] they are also the most favorable reasons, on account of both comfort and health." 15 Most who visited Texas during the spring of the year were usually delighted no matter what part of the country they saw. As one observer rhapsodized,

[there is] no spectacle more fascinating than the prairies of the West during the months of April, May, and June. They spread themselves out ... like a costly carpet, richly green, with an embroidery of exquisite flowers of divers colors. One cannot help be apprehensive that the hoof of his horse does not trample these marvels of nature and disarrange their harmony. The rarest cactus blooms of all kinds of colors are a true embellishment of nature. 16

Other observers, however, perhaps because they visited or settled at other, less attractive seasons, left unenthusiastic reports that said considerably less about the beauties of the country than about prevalent endemic fevers, sudden northerns, and flooded prairies. 17
Contemporary views on the healthfulness of the climate, however, were
influenced more by region than by the season of the year. Even friendly visitors
admitted that as one approached the coast the climate became progressively less
healthful. Austin himself felt need to qualify earlier glowing descriptions:
"Situations back from the rivers, or ... the coast, are remarkably more healthy." 18
An anonymous traveler in Texas in 1837 agreed fully:

Were I asked my opinion of the health of Texas, in a comparative point of view, I
would say that the lower country, from the Trinity to the Colorado, is as sickly as the
most unhealthful portions of Louisiana, ... [T]he country becomes healthier at any point
as you recede from [the] gulf. 19

"Persons lately from Houston represent that city as very unhealthy, congestive fever
being very prevalent, and in several instances terminating fatally after a few days' sickeness," cautioned the Austin City Gazette in 1840. "The folks from those lower regions had better emigrate for the summer season at least to this more elevated situation. Here they will find the atmosphere of pure mountain breezes cool and refreshing, ... and at the same time perfectly free from miasm." 20 A senior British diplomatic officer freshly arrived in Galveston, however, had a much different impression. Writing to Lord Palmerston in April, 1841, Sidney Hook was delighted to learn from locals that as to the climate of the Texas coastal region, "... its salubrity is proverbial all over America. ... [P]estential [sic] diseases, ... so common in the West Indies, [are] here unknown. ... In a word the mildness and salubrity of the climate of this region has no equal in America." By 1845 Hook's opinion had changed. After more than four years amidst its "delights", Hook described the coastal region as "... one of the most unhealthy situations of which I
have any knowledge in my 30 years experience of the bad climates of the world.... The Englishman's reconsidered estimation was echoed frequently and bitterly by the Viscount Jules de Cramayel, ad interim charge d'affaires in the Republic representing the French government. A decade later Frederick Law Olmsted came to similar judgment. "It was sickly on the coast," he noted, "but here [in the area around New Braunfels], it was very healthy. ... [Such German settlements in the Hill Country] presented the principal advantage of being free from malarious diseases of the lower country." As Olmsted remarked, the German settlers knew all too well benefits of being away from the coast; memories of their experiences there were still painfully vivid. "[Many of these] poor people," he explained, "had sailed from Germany in the fall [of 1845] and were landed in the winter ... on the flat coast of the Gulf, to the number of 5,200. ... [T]he war with Mexico was beginning. The country had been stripped of provisions and of means of transportation by the army. Neither food nor shelter had been provided by the immigration association. The consequences may be imagined. The detail is too horrible. The mass remained for months encamped in sand-holes, huts, or tents... The summer heats bred pestilence. The world has hardly record of such suffering." From her yacht in Galveston Bay, English gentlewoman Matilda Charlotte Fraser Houstoun observed in 1844 that

The poor women, still retaining their national costume [,] bareheaded, and ill-clothed, are most of them surrounded by shivering children, and are almost destitute of the means of subsistence, while the men are always out shooting, endeavoring in this manner to procure some slight repast for their hungry families; but has human beings have increased in the little island, the wild animals have become proportionally
scarce, and the daily search of the German emigrants for food, fully accounts to us for the diminution of game on this island. ... Everything has been destroyed, or scared away by the hungry Germans.

Because Germans forced the most numerous body of European immigrants and because so many of the Germans were literate, their experiences are better documented in travel literature than those of other European groups. Other immigrants, however, encountered many of the same hardships on the coast. As a British consular official testified:

Many a foreign settler ... in choosing ... an abiding-place along the coast, has doomed himself to an early grave. ... The sufferings there to which English, Irish and German emigrants have been subjected induces me to observe that it would be a worthy and becoming service if their respective Governments would supply their emigrating people with means of precise and accurate information, protect them from fraudulent speculators, and keep them paternally in view until they had made a lodgment on their adopted soil. Blighted expectation, sickness and bereavement by death are heavy and hard to bear among the friends and associations of home, but their pressure is increased a thousand fold when they are sustained among the unfamiliar faces and unwonted scenes of an alien land.

A German immigration agent bitterly complained of such abuses of other companies that had brought thousands of German families to Texas without necessary provisions, merely putting them on shore in Galveston and leaving them to fate. Yet even with solicitous efforts of immigration associations, he warned, the new settlers must not continue to adhere to notions about any particular climate's healthfulness.

"Texas will be just as healthy as Germany," he said, "as soon as living conditions are improved, by the provision of better protection against the rain, heat, and wind,
by the changing from cornbread, a heat-producing food, to properly baked wheat or rye bread, by the producing of fresh, cool spring or cistern water, by the use of only fresh meat, ... and by the replacing of poisonous whiskey ... with wine. 28

This beginning toward a profound change in perceptions of climate, health and disease found increasing contemporary commendation in the ante-bellum period. As one native remarked,

[C]auses for sickness from natural surroundings are not half so deadly and destructive in their effects, as those causes which are created by the people themselves. ... 'Oh! what a sickly climate!' cries the casual visitor; 'look, how pale the people are!' And I say ... the faces of the men are made pale by the dying struggles of liquid fire; the women's faces are made pale by the sorrow and hard labor; and the children are pale through improper indulgence and careless keeping. ... [People] have wrongly laid the whole blame upon the climate. If the people desire good health, let them organize their society into moral habits of industry, cleanliness, temperance, and order. 29

The editor of Houston's Telegraph and Texas Register added in 1843, "... [T]he main cause of our sickness is not attributable to the climate ... but to the scarcity of the ... necessaries of life." 30

Beliefs in the relation of climate to health or the lack of it, of course, were tenaciously held by many for decades. Yet long before discoveries of bacteriological science undermined such convictions, and certainly before the end of a "golden age of invalidism," early Texans were moving toward recognition that their state of health need not be determined solely by climatological conditions. 31 This greater emphasis on environmental factors amenable to control by man was an essential pre-condition for public health awareness and action. Yet the effects of poor diet,
inferior housing, and filth, even when complained of and recognized as of greater moment than climate, did not prompt widespread public concern. That an individual’s economic pursuits and personal liberty need be influenced and restricted by considerations of the entire community’s health was a concept scarcely thought of, much less acted upon. The impetus for public health programs came not from changing climatological perceptions, but from a leading actor, the significance of whose role has never been acknowledged in the *dramatis personae* of Texas histories—the mosquito.

However contemporaries may have differed on the healthfulness of the Texas climate, all were unanimous in condemnation of this pesky insect. Ferdinand Roemer in 1849 spoke to a sympathetic audience when relating "nights made memorable" by mosquitoes. "Give me a general assortment of alligators, snakes and lizards," he said, "rather than subject me to the eternal buzz, and the stinging bite of the ever [-] busy moschetos." There was no way to escape their ravages, Roemer added, "except to hang yourself or run away." Another writer concluded that "...an insurmountable barrier against the comforts of the people ... are innumerable swarms of ... mosketeoes.... Night, which brings darkness, and some protection to the horse [from gad-flies], brings more trouble and much misery to the rider. Mosketeos ... hold their tormenting ascendancy over him. The eternal hum of the mosketeos ... and through incessant attacks they insidiously insert themselves, in spite of every opposition, into every chink or cranny of his then ill-fated body."

The mosquito is significant, of course, not as an intolerable nuisance to contemporaries, but as the crucial link between actual and perceived climatological effects on health. For patterns of temperature and rainfall in the coastal region
which sustained for ten months of the year vast populations of voracious _Aëdes aegypti_, also maximized conditions necessary for the swift spread of yellow fever. It is grimly ironic, therefore, that early Texans' belief that climate affected the incidence of disease, and that the coastal region was decidedly less healthful than elevated areas in the interior were essentially correct, though for the wrong reason. The greatest threats to health were either increased or caused directly by poor diet, contaminated water, and unsanitary living conditions. But these threats were not enough to prompt remedial public or private action. Credit for these life-saving programs belongs to the world's deadliest insect. As Richard Shryock has written: "Epidemics frightened people into being good, in the sense that they led men to demand public health controls. For this reason we owe much to those diseases which ... aroused fear. Statutes might well be erected, especially to yellow fever ..., in commemoration of such services."

In his essay "Wordsworth in the Tropics," Huxley weighed consequences of responding to the labyrinthine flux and complexity of natural phenomena by inventing simpler, more consoling fictions. After decades of unrelenting pressure on the coastal region, yellow fever epidemics compelled reconsideration of the nineteenth-century tendency of coping with an evil by prohibiting or ignoring it. At the cost of thousands of lives, and to the eventual benefit of many thousands more, the mosquito convinced local and state governments in Texas that its challenge was not one that could be dismissed by legislative edict or some social injustice that could be wished away. The mosquito's scythe cut indiscriminately through all levels of society, and did so with ruthless frequency and effectiveness. In manner that made constitutional and legal history, the insect forced the creation
of agencies to protect the public's health by stimulating the rapid expansion and exercise of those legitimate powers of government to do for the people what they individually could not do for themselves.
PESTILENCE AND PROGRESS

On September 1, 1869 Galveston merchants sent to interior towns a circular which proclaimed:¹

CITY REMARKABLY HEALTHY--
MORTUARY REPORT FOR AUGUST PROVES
CONTAGION RUMORS GOUNDLESS.

Front-page editorial columns of the Galveston Daily News lent support to the circular, proudly calling attention to the fact that during August only sixty-five deaths from the city's population of 18,000 had been recorded from the following causes: typhoid fever, 12; teething, 10; still-born, 9; measles, 7; consumption, 6; congestion of the brain, 6; dysentery, 4; croup, 3; unknown, 3; dropsy, 2; general debility, 2; and suicide, 1. These figures, the editor said, "demonstrate beyond question that Galveston may challenge comparison with any place on the continent for general salubrity and perfect immunity from disease."²

The merchants' circular and the utterly serious editorial statement reflect the concern of urban communities in the coastal region over commercial implications of fever rumors. More generally and more significantly, these expressions of civic pride speak volumes on nineteenth-century perceptions of what public health realities meant and required. As Howard D. Kramer has observed, "Familiar afflictions soon produce their own anti-toxins stoicism." Habituated to common ailments, contemporaries seldom became aroused concerning their effects or their prevention.³ Although typhoid, scarlet fever, typhus, diphtheria and tuberculosis exacted heavy and consistent tolls, arguments for health reform based on the social and economic costs of these diseases failed to produce timely response from cities
along the Texas Gulf coast. Most enlightened citizens of the region agreed with physicians and sanitarians that the virulence of endemic diseases could be tempered by effective public health measures. Yet progress toward such programs came only after decades of terrifying rumors and devastating ravages of mass disease.

Smallpox is an ancient and immoderately ferocious disease. As Berton Roueche has remarked, with plague, cholera, and epidemic typhus, smallpox shares distinction as having once or twice in the past five hundred years come fairly close to eradicating the human race. It is under more control now. Full-fledged smallpox epidemics have been virtually unknown since the late nineteenth century. The only countries in which serious outbreaks have occurred in recent years are India, Japan, Korea, Venezuela, and the United States.  

Smallpox strikes with varying degrees of intensity. In some epidemics most cases are mild and a large majority of the victims recover. But the disease is not always so benign. At its worst—when known as black, or hemorrhagic, smallpox—it is almost always fatal. Victims of even mild attacks commonly succumb to one or another of several complications, including septic poisoning and broncho-pneumonia. Few persons have ever emerged unscathed from an attack of smallpox. Because of the postular eruptions which characterize the disease, and from which its name is derived, it is almost certain to produce permanent disfigurements. It can also be unnerving and repulsive. As one recent clinical study of the Chicago Municipal Contagious Disease Hospital noted, "The patient often becomes a dripping, unrecognizable mass of pus by the seventh or eighth day of eruption.... The putrid odor is stifling, the temperature often high, and the patient in a wild state of delirium." Moreover, unlike plague, cholera, typhus, and other deadly infections transmitted by carrier
insect or contaminated drinking water, smallpox is abundantly and manifestly contagious. Many epidemiologists consider it the most contagious of all diseases, including measles and the common cold.\(^6\)

Smallpox is caused by a durable virus which enters the body through the respiratory system. Present in exhalations of its victims for days before the appearance of telling symptoms, this virus is highly communicable during the entire course of the disease and may even be contracted from a victim many hours after his death. The virus, apparently as readily airborne as dust, can be conveyed by clothing, bedding, books, or letters. Although a specific cure has yet to be discovered, and while medical treatment is merely palliative, smallpox is not unavoidable. One of the few diseases against which certain immunization is possible, smallpox is regarded by many physicians as an anachronism.\(^7\)

Thousands of nineteenth-century inhabitants of the Texas coastal region upon whom smallpox left its mark, did not so regard the disease. Yet because the contagious character of smallpox was generally acknowledged, and because preventive vaccination techniques were widely used, the disease did not demand radical departures from traditional responses of existing public and private institutions. This is not to say that approach of the disease failed to generate deep anxieties and occasional panics. In 1844 the Houston Morning Star noted presence of the disease in towns along the Mississippi and voiced fears that

emigrants who arrive here ... may ere long introduce it into our villages. We believe that nearly one-fourth of the children of Texas have never been vaccinated, if this loathsome disease therefore should be introduced it might spread its pestilential influence from one extremity of the Republic to the other, and cause as much woe and misery as the destroying angel, who in one night cut off all the first born of Egypt.
The editor urged speedy vaccination of all children in order to secure for them freedom for life of this "terrible disease."  

This newspaper's characterization of the smallpox threat is significant in that it identifies the disease as "loathsome," "terrible," and preventable. Each of the adjectives reflect social and governmental responses to smallpox in urban communities of the coastal region. "Loathsome" connoted social ostracism and isolation in pest-houses for smallpox victims, "terrible" acknowledged permanently disfiguring scars on survivors, and preventable carried implicit criticism for contracting the disease.

Consider the tone of a letter written from Galveston during an outbreak of smallpox late in 1849:

The smallpox still continues among the prisoners in jail—and the pest-house is filled with patients. Daily we meet with persons on the streets, the unmistakable marks of those recent attacks of this loathsome disease, and the varioloid, are so striking as to bring self-evident conviction that contact to the unvaccinated must be extremely hazardous—and to give rise to the crying necessity of some sanitary regulation to keep subjects from all contact with the people, when their being at large might endanger the public health.

An editorial in Houston's Democratic Telegraph and Texas Register in 1851 was even more direct. After congratulating "good citizens" of the community for having quickly isolated smallpox cases among newly-arrived Irish immigrants, the writer went on to condemn the "shameful carelessness or stupidity" of those with the disease for having brought this "most direful pestilence...to our very doors." 

The incidence of smallpox seemed to confirm such beliefs that certain groups and classes were more liable to the disease because of innate racial, religious or character deficiencies. To be sure, even "good citizens" were occasionally stricken.
But the availability of vaccine matter squarely placed the burden of proof on the victim to show that by contracting the disease he had not abdicated civic and familial responsibilities. As the Georgetown South Western American observed in 1853:

The head of a family so neglectful of its safety as to fail to have every member of it vaccinated is guilty of a fault, we might say, a grievous sin; and in case one of them should die of this disease, can he wash his hands of their blood? This is a very serious matter, and should receive more attention than is given it. There is good vaccine matter to be had..., and no excuse can palliate the offense of omitting to use it.11

Yet in some cases there were excuses. Apart from philosophical or religious animadversions at the introduction of foreign substances into their bodies, many nineteenth-century residents of the coastal region feared lethal effects of defective vaccines. Complaining of the frequency of these tragedies in 1844, the Houston Telegraph and Texas Register offered sympathies to the families of leading citizens "terribly afflicted with almost extraordinary development of this loathsome disease, from inoculation."

During the past three months some thirty or forty cases of smallpox appeared; but finally, after general vaccination, its ravages were arrested, until recently, when some forty or fifty new cases developed themselves under the following extraordinary circumstances. An individual, little thinking what he was about to do, very imprudently undertook to quiz a practitioner of steam medicine by telling him that the only way to procure the pure vaccine matter, was to take the matter from the sores of a smallpox patient, and mix it with new milk. The steamer believing him, went off and procured smallpox virus, and mixed it with milk, and inoculated some forty or fifty persons, all of whom now have the smallpox, and some of
of whom have died. A preacher, we also learn, after having delivered a sermon on a Sabbath morning in a neighborhood in the country, informed the congregation that he had with him some of the genuine vaccine matter, and would vaccinate all who desired it; his was also this small-pox and milk mixture; and inoculated some 20 or 30, all of whom have the small-pox. We presume the disease will develop itself generally in a light form, although there is a great alarm and distress among the afflicted people, and have been several deaths among negroes. Such an imposition thoughtless no doubt in the person who perpetrated it, might have been palmed on thousands of well informed persons; people generally having but a slight knowledge of matters pertaining to the disease.

To most early Texans, however, the stigma of having smallpox outweighed fears of contracting the disease, as well as syphilis and tetanus, from faulty vaccines. Even with a substantial percentage of the population vaccinated, though, smallpox recurred in Texas cities virtually every year before the Civil War. These outbreaks, however, were never serious enough or so long-lasting as to challenge prevailing public and private attitudes toward health and disease.

Asiatic cholera presented threat of similar order. Its spectacular symptoms could neither be ignored nor romanticized. As Charles E. Rosenberg has described its physical manifestations:

The onset of cholera is marked by diarrhea, actue spasmodic vomiting, and painful cramps. Consequent dehydration often accompanied by cyanosis, gives to the sufferer a characteristic and disquieting appearance: his face blue and pinched, his extremities cold and darkened, the skin of his hands and feet drawn and puckered. 'One often,' recalled a New York physician, 'thought of the Laocoon, but looked in vain for the serpent.' Death may intervene within a day, sometimes within a few hours of the appearance of the first symptoms. And these first symptoms appear with little or no warning. He felt no premonition of cholera at all, reported a New
Yorker in 1832, until he pitched forward in the street, 'as if knocked down with an axe.'

Like typhoid, cholera spread along any pathway to the human digestive tract. Uncooked fruits and vegetables, and unwashed hands are frequently responsible for transmission of the disease. Contaminated water supplies, however, have caused the most serious and widespread cholera outbreaks.

After its initial appearance in the United States in 1832-34, cholera returned in 1848 and persisted until 1854. The disease disappeared abruptly and did not again present a major threat until 1866. Minor outbreaks occurred in 1873.

Texas suffered under each of cholera's three major visitations. The disease's terrifying nature lent itself naturally as ally to growing public health sentiment in the coastal region. Yet the impact of cholera was not serious enough or sustained so fully as to disturb contemporary views toward health, disease, and public responsibility. In Texas as elsewhere, cholera seemed to many a scourge of the sinful. As the Clarkesville Northern Standard noted in 1849, the disease's attacks were "mainly among foreigners, sailors, and others leading debauched lives." A Lavaca editor, writing also in 1849, agreed that "the most common predisposing cause is intemperance. The course ... recommended to ensure safety is regular attention to business, temperance, ... regularity of living, and keeping the mind free from all desponding thoughts ...." In other parts of the country the disease gradually came to be seen as a result of unsanitary conditions that could be remedied. Sanitary reform began to replace mortality as a protection against cholera. As Rosenberg points out, by 1866 enlightened citizens recognized and endorsed sanitary reform as a necessary prerequisite to moral improvement. There could be no public virtue without public health.

In Texas, however,
cholera invasions did not produce such changes in popular attitudes. The disease claimed thousands of victims and thoroughly frightened inhabitants of the coastal region. But changes in deeply-rooted beliefs on health, morality, and disease were not stimulated in Texas by cholera epidemics. Outbreaks of the disease were too widely spaced; consistent pressure was required to produce long-term and official response mechanisms. Cholera, like smallpox, seemed more to reinforce prevailing attitudes than to alter them. These social perceptions and attitudes did change, and fully encompassed costs of cholera attacks. But responsibility for those changes of attitude leading toward recognition of prevention through environmental control, rests with another mass disease whose threat, if no more deadly, was certainly more consistently made and more frequently carried out. 19

Yellow fever is a formidable disease. Today there is no cure and virtually no treatment. When infected with yellow fever one either survives and becomes immune, or dies. The ultra-microscopic, filterable virus that causes yellow fever is so powerful and acts so swiftly that none of the body's defense mechanisms can arrest its course. And there are no known drugs or antibiotics to mitigate its effects. After making the patient as comfortable as possible, the doctor is left to little more than watchful waiting. The incubation period of the virus in man is short—usually four or five days and often less. Yellow fever lasts from five to twenty days, and its severity varies widely from individual to individual. In mild cases, the victim runs a high temperature, is nauseous, suffers chills, and after several days slowly recovers. But in most instances the symptoms are severe, long lasting, and excruciatingly painful. In the disease's early stages the victim experiences restlessness, slight sensations of cold and nausea, and constipation.
Then his fever rises. The victim's face, lips, and tongue redden, the eyes swell in their sockets, and the membranes of the nose and throat rupture. These symptoms and the fever cause headaches that may lead to delirium. Then, after several days, comes a period of calm. Actually the most critical period of the disease, during this calm the victim either recovers or goes on to the final, and usually fatal stages of the disease. The high temperature and early symptoms of the disease which may have subsided return and worsen. The stomach cramps incessantly and the victim vomits uncontrollably. At first the vomit is a colorless serum, but as the disease progresses the linings of the stomach and intestines hemorrhage. Because the vomited blood is partly digested, and is dark brown or black, yellow fever was often known as "black vomit". The amount of blood in the vomit and urine is an index to the intensity of the attack, for death usually results from irreparable damage done to the kidneys and liver. Before death, however, the virus lodges in the brain and the victim's skin occasionally assumes a lemon-yellow tint.

Ordinarily the rate of case mortality is high, but may vary from 12 to 80 per cent. In 1666 on St. Lucia in the West Indies, however, yellow fever killed over 5,000 persons--every man, woman, and child on the island. In the 1893 epidemic in Rio de Janeiro, yellow fever was fatal to 94.5 per cent of those infected.

Chronicles of yellow fever epidemics are replete with grisly summaries of the number of deaths. But mere death tolls do not convey the scope of the disease. When yellow fever struck a city or town, few people who were not immune or who did not flee were spared by the disease. In 1878 Memphis, Tennessee had a population of 45,000. When rumors of yellow fever broke, 25,000 people fled.
Of the 20,000 persons left in the city, there were 18,500 cases of yellow fever. Over 5,000 of these cases were fatal. John Duffy estimates that during the 1853 New Orleans epidemic there were 40,000 cases of yellow fever among a population of less than 100,000, with nearly 9,000 deaths. The impact yellow fever had on communities cannot be gauged, therefore, without considering that for every death there were dozens of cases who would survive and who would remember.

In our times of effective preventive medicine and sophisticated programs of sanitation and hygiene, it is difficult to appreciate the effect that mere rumors of yellow fever could have on men. In the seventy years after 1839, Yellow Jack invaded the sub-tropical belt around the Texas coast seventeen times. Newspaper accounts of these epidemics in Texas bear a striking resemblance to Daniel Defoe’s Journal of the Plague Year (1665). Memories of that "jaundiced handmaiden of death" were never dim. There was no need to exaggerate either the swift spread of the disease or the agonies of its victims.

Texas doctors treated yellow fever victims in a variety of ways. Since the bacteriological explanation of communicable diseases lay in the future, the origin and causative factors of yellow fever were a baffling mystery. Wholly unaware of the mosquito’s role as host and transmitter of the yellow fever virus, physicians could only battle the disease by indirection. Their misconceptions of what caused yellow fever influenced their methods of treatment and programs of prevention. As it turned out, the doctor’s misconceptions made them unwitting allies of Yellow Jack. For their programs of prevention, while having some good incidental effects, made no headway at all against the mosquito. And their treatments were at least as lethal as the virus itself. In addition, these miscon-
ceptions about the origin, cause, and cure of yellow fever were of great significance to the legal devices created to prevent its appearance and spread.

One of the oldest theories on yellow fever held that the disease sprang from marsh miasmata. These foul vapors were supposed to react in certain meteorological conditions to produce an especially virulent form of malaria. Working from this premise, physicians applauded the clearing and draining of swamps. Such actions unquestionably made areas healthier. The incidence of malaria was made less common and, aside from the miasmata, the mosquito population was reduced. Unfortunately, the species of mosquito which acts as a host and vector for yellow fever, Aedes aegypti, isstrictly a domestic insect. For that reason yellow fever epidemics were almost always an urban phenomena.

While cities and towns cleared swamps with gusto, in the cisterns of their drinking water, and in puddles in their streets, the world's most deadly insect bred myriads.

Perhaps the most popular theory on yellow fever held that filth or decaying vegetable and animal matter gave rise to the disease. In the dangerous summer months, concerned citizens and physicians learned to crate boards of health to pick up piles of filth and scatter lime and other disinfectants in street gutters. Again, such measures were obviously helpful. Towns and cities were made cleaner and probably healthier. But the mosquito population did not depend upon filth or lime or boards of health. Later summer rains created more than enough shallow pools of fresh water to swell the ranks of already considerable armies of mosquitoes. All that was needed was for the virus to be brought within the community. A person infected with yellow fever infects every mosquito that bites him. These infected mosquitoes in turn infect other humans who serve as carriers for yet other mosquitoes.
The process expands geometrically, and in an amazingly short time an isolated case of yellow fever can become a serious epidemic. Of greater moment than the ideas about the disease's cause were those theories which sought to explain how the disease spread. It could never be settled whether yellow fever was contagious—that is, directly transmissible from person to person—or whether it was non-contagious and endemic. The debate assumed great proportions during the nineteenth century. Each school of belief, the contagionists and anti-contagionists, had able spokesmen. But the medical arguments never got very far because observable evidence both supported and contradicted each position. Clearly, the disease appeared in localities which had not (it seemed) been visited by infected persons, and those tending yellow fever patients did not always get the disease themselves. Yet equally strong evidence "proved" that the disease was brought in by outsiders. Most physicians in Texas adopted a middle course, known as qualified or contingent contagion. This theory held that yellow fever was somehow carried by ships or persons, but that local conditions of filth and meteorological influences were necessary for the disease to become strong enough to afflict humans. The significance of this medical controversy to the legal development of public health revolves about the true, underlying issue of the debates—quarantines. If yellow fever was spread by ships or persons, should not healthy towns quarantine for self-protection? But if the disease was endemic and sprang from purely local conditions, were not quarantines needless and harmful restrictions on trade and commerce? In practice, most Texas cities did both. Sanitary campaigns and quarantines as well were employed to fight yellow fever. Unfortunately, for victims of the disease, cleaning up filth did not affect the
mosquito. And quarantines almost never helped because of the incubation period of
the yellow fever virus. By the time a case of yellow fever was diagnosed as being
such it was already too late. To avoid damaging rumors and because of pressure
from business interests, physicians were often reluctant to declare the presence of
yellow fever until the dreaded "black vomit" removed all doubt. After this
much time had elapsed, quarantines, filth scavengers, boards of health, and even
physicians were irrelevant. Once introduced, nothing could stop the ravages of
yellow fever except the mosquito-killing frosts of late autumn. Twenty-two times
in the seventy years after 1839, yellow fever invaded the coastal region and claimed
thousands of lives. To a far greater extent than smallpox or cholera, yellow fever
was responsible for public health awareness and action.
MOSQUITOES AND MEDICINE MEN

The medical profession in early Texas was utterly unprepared for the strenuous demands about to be made upon it by the mosquito. In the beginning, the terms of the contest were almost ludicrous: an unorganized, largely untrained rabble thrashing about with crude tools at the mere shadow of an attacking enemy that slipped past their defenses and multiplied into millions. That the mosquito should be an omnipresent though invisible foe made the challenge almost an impossible one, for the medicine men, assailed on all sides by quacks, confronted by hostile legislatures and faced with the growing indifference and antipathy of the people, were in great difficult already.

The growth and development of the American medical profession faced many obstacles and suffered many setbacks. The widespread recognition of the primitive state of medicine in the United States at the beginning of the nineteenth century was matched by immense confidence that the profession would develop. In medicine the new nationalism was expressed in a firm determination to build up a science and a dignity befitting the Republic. The optimism of the Enlightenment, however, soon faded. While an original premise in the thinking of the Revolutionary generation was that science had the practical effects of improving and adorning everyday life, there was little challenge to the assumption that the theoretical and practical went hand-in-hand. By the 1830's the tone had changed, with serious consequences for a struggling medical profession.1

Under way was a subtle, pervasive transformation in the nation's conception of science. The new sense of what American science should be evidenced itself by
strident demands for the practical. The rising clamor for utility carried with it an implicit denigration of the theoretical scientist. Perhaps as a manifestation of the Jacksonian revolution, the pure scientist became identified with luxury, snobbery, and elegance. An energetic people and an expanding commercial society valued highly the homespun practical scientist, the inventor. But the neglect of theoretical science that de Tocqueville ascribed to the egalitarian practicality within a burgeoning economy had unfortunate effects on the medical profession. Serious students of science became increasingly aware that rampant utilitarianism constituted a grave threat against the dignity and integrity of the subject.  

In the abstract, the issue became one of promoting the ideal of pure, disinterested, idle speculation and experiment to a society that possessed a deep, angry, sullen hatred of the concept of aristocratic intellect. The debate expanded beyond the Enlightenment argument which held that pure science, even if momentarily unproductive, would eventually translate its principles into machines. Caught up in this cosmic debate on pure versus applied science, the medicine men held as their principal enemy the empiricism by which every man could be his own doctor. But by condemning empiricism and by rallying in the name of utility to the slogan of no system, no theory, no hypothesis, physicians came to a painful dilemma. Without basic research how was medical science to advance? Beyond the irony of American medical science being the product of idle, aristocratic, mostly non-

American speculation and theory remained a deeper problem. Was not freedom from system and tyrannical generalizations bound to lead to the quackish empiricism they deplored? Indeed, was medicine a science at all? The future of the medical profession hinged on these questions. The tremendous pressure for practical science
made it increasingly difficult for apologists to plead with the democracy to understand that basic research should be respected, on the grounds that someday it would justify itself in terms the people imposed. 3

Much could be made of a comparison of the medical profession to the legal profession as sketched in Perry Miller's *Life of the Mind in America*. Both professions faced many of the same obstacles. But while the transformation of colonial America into a nation proceeded apace through a greedy appropriation of legal science to suit the native circumstances, Jacksonian antilegealism could hold no light to the realities of sickness and disease as obstacles to the rise of a medical profession. For a people profoundly suspicious of lawyers could easily turn the same suspicion upon doctors, and with even greater hostility, because doctors would not only take their money but their lives. 4

As the controversy over theoretical versus practical science continued through the decades before the Civil War, another issue, more immediate and more urgent, involved the medical profession. By the 1830's the very notion of medical progress was deeply disturbing. On one hand, there was great pride in scientific and technological advances. But at the same time progress drove home the lesson that what the medical profession holds and does today will be obsolete tomorrow, so that practices of any one moment may well be proven murderous. Regular physicians were quick to realize that the basic research they advocated could yield discoveries potentially more threatening to the profession than unbridled empiricism. The fact that they dealt with life and death made doctors singularly unable to accommodate change. More and more, it was difficult for medical leaders to convince themselves and the country that medicine's claims of scientific respectability were consistent
with the constant rejection of old methods as new ones proved superior. The dia-
logue in the medical journals seem remote and academic. But in everyday
practice the issue was painfully real. In a profession which depended heavily upon
a relationship of confidence and trust with its clients, the adoption of new techniques
called patients to suspect (often justifiably) that the physician's former methods
had been killing them.  

Changes in methods of treatment and advances in medical science tended to
come, therefore, from younger physicians who had less stake in outmoded concepts.
Medical education assumed great importance and moved into the storm center of
controversies over what American medicine should be. The growing demand for
doctors and the wholesale removal of state standards during the Jacksonian period
created a proliferation of medical colleges. Between 1830 and 1845 the number of
medical schools doubled. Even the best medical colleges left much to be desired.
But the commercial character of most of the new schools made them little more than
hatcheries for quacks. A medical college attempting to uphold its standards would
find itself without students. By the 1840's and 1850's doctors commonly had studied
three years with a preceptor and attended lecture courses for two terms of approxi-
mately sixteen weeks each at a medical college that usually lacked clinical
facilities and a library. After passing an examination by the college's professors
and after writing an inaugural dissertation, the candidate became a full fledged
M.D. Persons without formal training underwent an examination and received a
license from local medical societies. In 1847 over one-half of the "doctors" in the
country practiced without authority.  

If an inability to enforce professional standards hindered the development of
the medical profession, at least as much a threat, though less tangible a problem, was the haunting uncertainty felt by regular physicians. A lawyer could gain respect by saying honestly that he might not be able to win his case. But when the stakes were life or death, patients did not want honesty, they wanted results. From almost anyone except their doctor, people could accept frank admissions of ignorance and limitation. The compelling and understandable desire to try anything to alleviate human suffering often made physicians susceptible to being pressured, against their better judgement, and certainly in advance of their knowledge, into prescribing drugs and inflicting treatments which, even if they failed to cure, at least had the redeeming quality of ratifying the patient that something was being done. And yet however such practices may be rationalized, they were not scientific and not genuine medicine. By the nature of their work and by the limits of their science, physicians were easily trapped in a cycle of pretending for the patient's sake that they knew more than they actually did, having then to proceed to treatment from ignorance, and thereby following the empirical practices of those they derided as being quacks. Too often the opposite course had equally bad results. For by confessing doubt and by refraining from doing something that might prove harmful, the regular physician played into the hands of fraudulent doctors who had unlimited promises and treatments to match. Whatever it meant to the people, the Jacksonian guarantee to life, liberty, and quackery spelled endless difficulties to a struggling medical profession.

While progress and uncertainty seemed to undermine their respectability, and while the inability to control education and enforce standards handicapped the development of medical science, disputes among different schools of belief were
perhaps the most serious obstacles to the growth of the American medical profession. Disruptive at any time, during epidemics these disputes grew into fierce controversies which occasionally split the profession literally into armed camps. When disputes over methods of diagnosis and treatment were settled not by research but by the code duello, it is small wonder that doctors were lamenting the decline of the profession in the 1830's and 1840's. Yellow fever epidemics were particularly damaging to the prestige of doctors. Even the untutored layman could see that it made little difference for doctors to exchange angry debates on opposite method of treatment, none of them worked anyway.

The disputes between different schools of belief among the profession often involved specific issues, such as the infectiousness of a certain disease. But more significant disputes concerned the meaning of the discipline itself. One of the many major controversies of the 1850's rested on the question of whether medicine relied on art or nature. In this dispute doctrines surfaced which urged the physician to do as little as possible and give virtually no medicines. As Oliver Wendell Holmes argued, physicians should spend their time "studying what nature has done with her American elements" so that she might "teach us what disease is here, how it generated, and what kindly antidotes have been sown in the same furrows with its fatal seeds." Condemned as heresy and praised as revelation, Holmes' ideas in contrast with "heroic" treatment of the 1850's suggest the bewilderment that existed as to what American medicine should be.

Difficulties faced by American physicians before the 1850's also troubled the medical profession in early Texas. The institutional history of medicine in Texas, before and after 1850, parallels closely that of other states, particularly other
Southern states. What is different about the growth of the medical profession in Texas and what relates so closely that growth to the constitutional and legal development of public health is the challenge of the mosquito. Without that challenge the Texas medical profession would have likely evolved to roughly the same end, but by vastly different means. For nothing more seriously threatened or more generously aided the development of organized medicine in the state than yellow fever epidemics. The inability of regular physicians to check early ravages of the disease exposed weaknesses of their science, invited popular contempt toward excesses of their treatments, and undermined attempts to secure legislative sanction for their monitorship over the profession. After forty years of desperate combat, regular physicians were coming to recognize that public health leadership permitted unique opportunities to enhance interests of the profession. By appropriating municipal health machineries and thus translating their principles into public policy, regular physicians were eventually able to demonstrate the utility of their science in terms the people and their legislators could understand. Before this strategy of gaining professional goals through public health achievements could be fully formulated and executed, however, physicians in Texas first had to cope with a formidable enemy and overcome a serious crisis of self-confidence. 12

Quite powerful by itself, Yellow Jack found an unexpected ally in the medical profession. With the best of intentions and with honest convictions, physicians in Texas employed methods of treatment that could not have been better calculated to free yellow fever victims from their misery—permanently.

Lacking any better explanation for disease, medicine men fell back upon authority and tradition. Two main theories were fundamental to virtually all medical
practice. Sanctified by centuries of acceptance, the Galen theory postulated that
an imbalance of the four humors—blood, phlegm, black bile, and yellow bile—
was the cause of sickness. The other theory held that a morbific or peccant substance
either entered the body in particles or air and tainted the blood or else was created
by the putrefaction of retained humors. However, whether the sickness was caused
by an imbalance of humors or by morbific substances, the cure was the same—the
body must be cleansed and purified. 13 Hence a rigorous program of bleeding, blis-
tering, sweating, vomiting, and purging became the standard fare for all sorts of
disease.

Well into the 1870's Texas physicians treated yellow fever victims in accor-
dance with the Galen and peccant or morbific substance theories. The first line of
defense was always the mercurials. Known popularly as calomel, mercurous chloride
was prescribed by doctors for everything from tumors to "extreme Melancholy". To
describe the effect of this chemical as a strong laxative would be euphemistic.
Calomel was called a purgative for good reason. Whatever calomel may have done
to restore a balance of the body humors, its indiscriminant use caused incalculable
damage to patients. 14 Mercurous chloride in any dosage is poisonous. To determine
if the patient had been given enough, doctors watched for an enlargement of the
salivary glands and an excessive flow of saliva. Such reactions are the first signs of
acute mercury poisoning. Given in sufficient quantities calomel causes the tongue
and gums to ulcerate, and the teeth may fall out. Dr. Benjamin Rush, the famous
Philadelphia physician who dealt with the 1793 yellow fever epidemic, and who had
great influence in encouraging the use of "heroic" tactics to combat disease, noticed
the unfortunate effects of calomel but said "the salivation was a trifling evil, com-
pared with the benefit which was derived from it."\textsuperscript{15} Texas physicians agreed.

Writing in 1873, a doctor from Calvert, Texas defended his use of calomel to treat yellow fever by pointing out that the several patients who had their teeth fall out either had dental problems beforehand or were "drunken Irishmen."\textsuperscript{16}

Most of the Texas medical profession was by the 1870's moving away from a reliance on calomel or even quinine. But each of the major treatments for yellow fever highlight the problems of progress and change. It was no easy matter for a physician to abandon the single most important drug used in his practice. In some areas of Texas calomel was used until the 1930's.\textsuperscript{17}

If calomel failed to produce a recovery, the next universal treatment for yellow fever, as well as for other ailments, was bleeding. Again, Benjamin Rush was greatly instrumental in the widespread adoption of blood-letting as a means to restore health. Rush felt that the chief purpose of the blood was to stimulate the action of the heart and arteries. Since the yellow fever victim showed signs of being flush and overstimulated, it was logical to reduce the amount of blood. Apparently working from the premise that desperate diseases require desperate remedies, Rush advocated taking as much as four-fifths of a patient's blood in some instances.\textsuperscript{18} Texas physicians were particularly fond of blood-letting as means of reducing the temperature of a yellow fever victim. Taking anywhere from 50 to 175 fluid ounces of blood achieved the objective of reducing fever. But that the patient's lowered temperature was the result of going into a coma was not recognized. From the 1830's to the 1860's Ashbel Smith, perhaps the most intellectual and best trained of all Texas physicians, advocated a judicious use of blood-letting as a method of treatment. It was his policy to bleed yellow fever victims until they
fainted, and to repeat the treatment daily until the patient showed signs of recovery. More eclectic Texas physicians combined both approaches. In 1859, one Galveston physician boasted that in the course of his practice, he had drawn "blood enough to float the General Jackson steamboat, and [had given] calomel enough to freight her." This, however, was conservative treatment compared to radical expedients such as tobacco smoke enemas, electric shocks, and the injection of saline solutions into the veins. In vogue among Houston doctors during the 1884 yellow fever epidemic was the practice of plugging the rectum with beeswax or oilcloth so as to check the diarrhea of patients.

If calomel, bleeding, and radical experiments failed to get positive results, physicians fell back on blistering and on tonics. Blistering consisted of placing a poultice of some irritating substance on the skin—usually mustard plaster—until it created the equivalent of a second or third degree burn. Since the wound was almost certain to become infected and supuration ensue, both the patient and the physician could see in the formation of pus that the blisters were drawing poison from the system. As a last resort, and if the yellow fever victim seemed to be somehow "under-stimulated," physicians administered stimulating tonics. Usually opium or brandy, these stimulants had no more effect than anything else the doctors used. By the 1860's the "heroic" age in Texas was ending, and a sharp reaction was setting in.

Yellow fever epidemics had a great deal to do with this adverse reaction to physicians and their treatments. As a Galveston doctor remarked in 1868:

The physicians all over our Southern country have made themselves a laughing stock for the public by their crude and undigested views
about this disease, and by their wrangling
and uncertain diagnosis at the commencement
of every epidemic. No wonder the people
have lost confidence in the profession. ²²

Moreover, victims of the disease who failed to get a doctor's attention often died
just as well or better than those getting bled, purged, blistered and tonicized. For
centuries, of course, patients had been conditioned to rigorous treatments. The
expectation was that cures would be painful and unpleasant. The more nauseating
a medicine tasted or the more painful a remedy felt, the more efficacious it was
assumed to be. But when physicians themselves began condemning the practices of
other physicians as being murderous, doubts of the patients grew. An Austin editor
in 1868 scorned the prevailing methods of regular physicians by recounting the
following conversation:

"You have lost your baby, I hear," said one
gentleman to another. "Yes, poor little
thing! It was only five months old. We did
all we could for it. We had four doctors,
blistered its head and feet, put mustard
polishes all over it, gave it nine calomel
powders, leeched its temples, had it bled,
and gave it all kinds of medicines, and yet,
after a week's illness, it died." ²³

Not all physicians felt that desperate diseases required desperate remedies,
but by the nature of their work and by the limits of their science, physicians were
easily trapped into aimless empiricism. Writing in 1873, Houston physician W. D.
Coleman observed that:

It is often remarked by individuals accus-
tomed to see yellow fever that they would
rather risk their chances for recovery with
the attendance of an experienced nurse, than
with the treatment of a physician, and in
explanation say that the nurse would rely only
upon the power of Nature to eliminate the
effect of the poison, while the physician,
anxious to do something, and not knowing
exactly what to do, would do harm. 24

Too often the opposite course had equally bad results. For by confessing doubt and
by refraining from doing something that might prove harmful, the regular physician
played into the hands of incompetents and frauds who provided heroic cures without
the both of heroic treatments. One such fellow, Absalom C. Denson, received
high praise from the Nacogdoches Times in 1848 for his book on The Southern and
Western Way Bill to Health, with a new, easy and successful Practice of Medicine,
for the lasting and permanent Cure of the Southern and Western Winter and Summer

Diseases, without Calomel, Lobelia or Steam:

Dr. Denson deserves much credit and merits
the patronage of the public for the plainness
and brevity to which he has reduced the
system of Medicine, and for the important
discovery of remedies (aside from calomel,
lobelia and steam), whereby the human
family can relieve themselves of the multi-
farious diseases (without the aid of a physician)
to which they are subject. His work is plain
and simple, free from bombast, to be easily
comprehended by the most common mind. The
Doctor is quite an original genius—one of
nature's own children, and if we may be
allowed the expression, without derogating
from his character and standing, he was born
in the woods, and not chocked on the weeds
of education; he has fully displayed the power
of man in his original state, verifying the old
adage that experience is the best teacher. 25

There was nothing remarkable about Dr. Denson, his theories, and the popular
reception they received the year following a serious outbreak of yellow fever.

Regular physicians had long been accustomed to dealing with original geniuses.
But when trained and educated practitioners began to question in toto the efficacy of their own remedial agents, the public had cause for concern at the profession's doubt as to its own future. As a Waco physician conceded in 1876,

A great many persons have become skeptical about treatment[s] [for yellow fever], and say physicians do no good, and really, to the calm, reflecting mind, after reviewing the different and sometimes directly opposed methods of treatment, it does seem as though a greater number would recover without medicine than with it, provided they could be kpt in bed and properly nourished. 26

Greensville Dowell, one of the state's leading physicians during the 1870's and 1880's ended his book on yellow fever with the following: "I will close this paper by the solemn injunction to all physicians: Never make a prescription until you understand the pathological condition. Better to do nothing and give nature a chance."27 In response to statements of this sort, one journal of opinion asked if the situation did not require the public to "act as an umpire" between the regulars and the sectarians, and reach its decision "after a careful perusal of the undertaker's bills."28

Physicians' treatments for yellow fever, then, contributed to the general decline of the profession's prestige and influence. Again and again yellow fever epidemics devastated the Texas coastal region. And each epidemic made clearer to Texas physicians that the lives of their patients and the preservation of their practices demanded that a counterattack be mounted through organizing the profession, raising its standards through education, and purifying its membership. Only then could physicians regain popular support necessary to push local and state governments toward effective administration of public health and adequate regulation of
medical practice--goals that by the late 1870's physicians perceived as inseparable.

Before the doctors could regroup, enlist popular support, and provide effective

public health leadership, however, desperate inhabitants of the coastal region sought

relief from increasingly severe attacks of yellow fever by requesting and then

demanding that municipal governments make good on constitutional promises of solici-
tude and protection for the public's welfare.
A POWERFUL LEGACY

Had it not been for the heat, dust, rain, mud, flies, filth, mosquitoes, and numerous endemic diseases, nineteenth-century cities of the Texas coastal region would have been very pleasant places in which to live. For however much the salubrious climate, aesthetic features or commercial opportunities of these cities might be praised in voluminous booster literatures, an oppressive heat and humidity were realities that could not be wised away. If anything was worse than the heat, it was ankle-deep dust on the unpaved streets. When rain lowered the temperature, these cities revealed other charms, no less real. Streets became quagmires, gutters became open sewers for human and animal refuse, flies and mosquitoes multiplied into thick swarms, and conditions became ripe for the swift spread of disease. By 1880, however, municipal governments of the region's largest cities, Galveston and Houston, could boast to constituents of significant progress towards cleanliness and health. Major streets were paved with crushed shell; a system of garbage collection removed most of the filth and refuse from sidewalks and gutters, City Hospitals tended to the destitute sick, and active boards of health saw to the strict enforcement of sanitary ordinances.¹

Impetus for this progress in the institutional development of municipal health agencies derived, of course, from fears of epidemic disease rather than from rigors of the climate, muddy streets, or uncollected garbage. Historians of public health have long acknowledged the life-saving role of epidemic disease. As Richard Shyrock, C.-E.A. Winslow and others have pointed out, nothing pertaining to health excited the minds of the people so much as an epidemic, or stirred them
into action more quickly.² The constitutional and legal ramifications of such catastrophes, however, have never been adequately studied. This neglect is largely attributable to the survey literature's focus on the institutional American cities of the North and East. Whether in cities or in the country, in town or on the frontier, the great mass of nineteenth century Americans knew with terrible intimacy the blighting effects of poverty, filth and disease. Public health was never strictly an urban problem. But it was in burgeoning cities, where threats to life and health seemingly increased in geometrical ratio to population density, that the desperate need for sanitary reform and public hygiene first compelled local and state governments to respond with positive measures. It was there that recruits for the battles of sanitary reform were enlisted, strategies of public hygiene mapped, and campaigns of preventive medicine waged. And it was there, in a steadily deteriorating urban environment, that reforms were first secured and victories won.³

Most early public health progress in large American cities was modeled after English reforms. Late in the eighteenth century, squalid living conditions in English manufacturing cities attracted the eye and then the indignation of New Humanists. In London, effective legislation to end the gin drinking menace in 1751, improved care of parish children, and extension of medical practice among the poor, accompanied street paving, better drainage and scavenging, and increased water supplies to help lower the death rate dramatically. Also important were investigations conducted during the 1830's by Edwin Chadwick, Robert Owen, Dr. Southwood Smith, Lord Ashley, and others on the relations of poverty and disease, culminating in the famous General Report on the Sanitary Conditions of the Labouring Population of Great Britian in 1842. Depicting harrowing scenes of filth
and degradation of urban poor, Chadwick blamed their high mortality rate directly on "atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close and overcrowded dwellings." He argued that when such conditions were removed "by drainage, proper cleansing, better ventilation, and other means of diminishing atmospheric impurity," epidemic and endemic diseases were abated or disappeared. Emphasizing the economic and moral value of good health, Chadwick recommended sewerage, refuse removal and better water supplies. This report led to a series of Parliamentary investigations and acts which gave England by 1848 a public health administration superior to anything developed in the United States for the next forty years.4

Americans had watched with complete approbation the crusade of Chadwick and others against poverty, misery and disease in England's teeming cities. Chadwick's General Report drew from leading American periodicals searing indictments of English slum quarters. New World commentators complacently offered fervent thanks for the manufacturing classes of America had escaped the poverty and degradation of Europe. As Kramer has noted, "Here and there some doubt was cast on the permanence of this escape--some worry lest the United States in another twenty-five years might not 'exhibit some of the dreadful scenes which now sicken us when we look abroad.' It was not necessary to wait so long."5 By mid-century the larger American cities could duplicate many of the scenes described in Chadwick's General Report. In 1847 the North American Review complained that the poor of Boston were "now worse lodged than their brethren in the foulest and most crowded districts of the large cities of Europe." By 1850 the average span of life in New York, Boston, Philadelphia and other American cities was less than in London--a
metropolis criticized only a few years before by American journals of opinion for its "sickening" scenes of misery and depravity. 6

As the similarities of urban conditions on both sides of the Atlantic became more evident, British public health achievements did much to encourage attention to American problems that had long been neglected. Successes in dealing with epidemics, especially the 1866 cholera threat, consolidated public support for health agencies of the nation's largest cities. Writing of the second half of the nineteenth century, John B. Blake has concluded:

Spurred by social necessity and motivated by humanitarian idealism, economic and life-saving benefits, and increased popular faith in the value of science, public health officials and public spirited laymen advanced municipal public health practices from almost nothing to a vigorous and useful function of local government. 7

However accurate for great metropolitan centers of the North and East, such characterizations of American public health are only remotely applicable to the experiences of smaller cities in other, less industrialized regions of the country during the same period. Acting upon an etiological theory implicit in Chadwick's 1842 General Report, large American cities sought to equip houses with good ventilation, to clean up streets and alleys, to remove trash, to construct sewerage, and to provide a pure and plentiful water supply. Against diseases such as cholera, typhus and typhoid, these measures were helpful, etiological theories were reinforced, and demonstrable results and lower mortality rates attracted increasing public support. 8 Against yellow fever, however, such measures for environmental sanitation had little effect.
For reasons as yet little understood, yellow fever epidemics, which had regularly devastate northern and eastern cities during the late seventeenth and eighteenth centuries, moved south after 1800. During the nineteenth century, therefore, the most serious epidemiological threats to the United States were concentrated on Southern cities that usually lacked even the most rudimentary of institutional machineries for public health protection. Efforts to improve sanitation, water supplies, sewerage, and housing in New York, Boston, and Philadelphia lowered mortality rates and seemed to prove the value of effective health administration. In Southern cities during the same period, however, such measures, even when applied, failed to produce comparable results. Environmental sanitation offered no protection from increasingly severe yellow fever attacks. In the Texas coastal region municipal corporations looked to their own resources for relief from the "saffron scourge."

Before 1880, however, since the only concern which translated itself into concrete governmental policies of sanitation stemmed from these fears of epidemic disease, the institutional development of public health machineries in the regions largest cities, Galveston and Houston, assumed a spasmodic, seasonal rhythm. In addition to this irregular, crisis to crisis approach to public health problems, other formidable obstacles blocked progress toward an improved sanitary condition. The unstructured, individualistic nature of these communities' frontier society militated against programs of concerned, collective actions.

Tolerant during emergencies, citizens of Galveston and Houston were highly suspicious of long-term governmental interference in private affairs and accepted grudgingly the notion that the public welfare justified infringements on
their freedom to do what they wished on and with their property. Support for public health in the abstract was unanimous. But city authorities presuming to tell the citizen what he could and could not do with his backyard privy, stable grounds and garbage was another matter entirely. It was fine that one's neighbors should be made to keep their property clean and their trash off the streets. But when sanitation ordinances meant bother and expense, and when violations of these ordinances meant heavy fines, there were grumblings about the city needing to mind its own business.\textsuperscript{10}

The public's indifference to unsanitary conditions during most of the year and its steady reluctance to comply with the spirit if not the letter of health ordinances were made more serious by the confusion of physicians as to just what would make Texas coastal cities less prone to epidemic disease. That feuding factions of the medical fraternity offered contradictory advice on what constituted necessary sanitary steps was all too often the encouragement officials needed to take the middle course and do nothing at all—nothing, that is, until it was too late. Moreover, the fact that yellow fever attacked only every four or five years\textsuperscript{12} meant that energetic practices adopted at the height of an epidemic would have time to fall into disuse before they were needed again. Despite warnings from regular physicians and despite editorial jeremiads, the years when yellow fever failed to appear lulled these cities' growing populations into dangerous complacency.

Another obstacle to the development of effective programs of public health was the city government itself. Especially in the early decades, municipal officers in Galveston and Houston adhered to a curious philosophy of reverse laissez-faire.\textsuperscript{13} A basic theme of this philosophy was that the city government wished to be left as much as possible free from the demands of citizens and special interest groups. In
the lexicon of city administrators, a public nuisance was anyone who goaded them into troublesome, expensive programs. Be it drains and sewers, a hospital for the indigent, or ordinances regulating backyard privies, city aldermen had no desire to seize the initiative for action. People expected little from their government, and the leading citizens who once a week wore the hats of municipal officers met these expectations fully. Certain enough, in as much as commercial enterprises or railroad speculations were concerned, the officers of the government labored untiringly to ferret out possibilities for profitable investment. But the dividends from public health schemes came in slowly and were usually intangible. During most of the year, citizens and the governments of Houston and Galveston were quite happy to let each fend for themselves. The less government interfered with private citizens and the less those citizens petitioned the City Council for bothersome, expensive measures, the better.

Even when municipal administrators were unanimous in strong wishes to protect the public health, as they were during yellow fever epidemics, there was no tradition of powerful institutions to enforce by specific and consistent policies the police powers granted the city in its charter. And even when the machinery for such institutions was suddenly and imperfectly created, city officials lacked the experience, and expertise and the money to make them work.

Eventually, these obstacles would be overcome. Over the decades, Galveston and Houston would lose much of their frontier roughness, and their citizens would come to expect and demand that municipal authorities make the city healthy, clean, and liveable. The opposition of the business community changed gradually into a role of strong support for policies that would protect public health
as they promoted public health. And city governments would acquire with practice greater skill in administering sanitary policies. Even the medicine men, long since put to rout by Yellow Jack, would regroup and assume active leadership responsibilities on city, regional and state levels. But the effective and smoothly functioning public health programs of 1880 were not achieved until after profound changes in contemporaries' estimations of the powers of their municipal governments were reached and acted upon.

Because of the fragmentary nature of surviving sources, the institutional development of public health in Galveston and Houston before 1865 is difficult to trace. On one level, the institutions created within the structure of these municipal governments to protect the public health appear to have developed in a smooth, almost uninterrupted fashion. But the practical level of the actual workings of these institutional forms, the evidence suggests quite a different picture. Apart from the reality that municipal health agencies may have had on paper, in practice they were largely informal and temporary committees. Like voluntary fire companies, Board of Health in Galveston and Houston before 1865 functioned only in emergencies.

Consider the evolution of public health agencies in Houston. The first evidence of institutionalized public health there appears in 1839, when in the spring of that year Houston's mayor was asked to have the Board of Health report to the city council "in relations to their privileges and duties in regard to their preventing nuisances within the bounds of the city." Precisely when this Board was created, or how many members it included is not known. Clear from the record is the uncertainty about the powers and responsibilities of the Board.
Since 1839 was the first visit of Yellow Jack in Houston, that residents and officials should have had little appreciation of the danger is not surprising. What is noteworthy is that the ostrich-like approach of 1839 to the threat of yellow fever became a pattern that would for thirty-five years cost hundreds of lives. The first stage of this pattern was that rumors would be ignored and reports of the disease in Houston would be hotly denied until the epidemic reached immense proportions. Then, after it was too late the public and newspapers would snap from their lethargy and demand herculean efforts from dazed city officials. Finally, the city authorities would be made scapegoats for having allowed the epidemic to occur.

The course of the 1839 epidemic in Houston illustrates this pattern. As late as September, when yellow fever was already ravaging Galveston, newspapers in Houston maintained that their city was remarkably healthy and sure to remain so. Chiding Galveston authorities for establishing the "universally exploded custom of quarantine regulations", the leading Houston newspaper complained of this great inconvenience to commerce. Pleading with the citizens of Galveston to adopt measures "more in accordance with the intelligence of the times", the newspaper argued that quarantines did "no earthly good in preventing disease" and inflicted great injury to the economy of the area. As for Houston, the local newspaper saw no cause for alarm and reminded the city's inhabitants that "although we are at that particular season of the year when it behooves all to be more than usually careful in their habits and diet", the best preventatives against the disease at all times are a "tranquility of mind, regularity of habits and the conscientious discharge of public and social duties." Admittedly, "the direful reports are spreading through the interior of the prevalence of this disease among us." But
the Board of Health reports only three cases of yellow fever in the city, "there is no cause for drastic action." ¹⁹

A month later the editorial tone had changed. The Board of Health, previously regarded as the only necessary guardian against the disease, was now finding it impossible to keep count of the sick and see to the burial of the dead. ²⁰ Late in October, in an article entitled "Health of the City," the leading Houston newspaper finally admitted that a terrible epidemic existed. After praising the Board of Health for the discharge of their duties, the article then lashed out at the city administration for not having spent more money to stop the accumulation of filth. The newspaper was especially angry that a quarantine had not set up to protect the city from Galveston: The article claimed unanimous community support in its demand that something be done about public health, but offered no constructive ideas on specific programs or agencies to combat the disease. When something was done to materially improve the health of the city, editors, the Board of Health, or the city government were not responsible. Late in November frosts came to end the seige of yellow fever.

Variations on the pattern of response to the 1830 epidemic influenced the development of two governmental health agencies, the City Hospital and Boards of Health. From a population of slightly more than two thousand, there had been over 200 deaths and perhaps as many as 1,500 cases of yellow fever. ²⁴ Created during this emergency, the City Hospital became an unwanted drain on the government's resources. Tending primarily to those persons too poor to afford a private doctor, the hospital became a haven for the destitute sick of the city. And quite unintentionally the city council found itself saddled with a troublesome and ex-
pensive department that unlike yellow fever, failed to go away. At first the hospital was put in the charge of the City Physician, and in June, 1840 the council voted to pay him $125 per month, January through May, and to increase that pay $25 a month during the dangerous fever season which lasted from June to December. 25 This arrangement soon proved unsatisfactory. Private contributions to the hospital lagged, but the numbers of sick did not. Unable to get by on the meager salary of the City Physician, the hospital demanded month after month more money. In January, 1841 the city council agreed to pay the City Physician one dollar per day for each pauper and three dollars per day for each boarder in the hospital. 26 The cost of this scheme quickly encouraged the council to explore means by which the city could be relieved of this responsibility to the public health. In a called session dealing with the poor and the sick, a resolution was passed which requested the county commissioners to pay the expense of maintaining the destitute sick. 27 Understandably, nothing came of this overture to the county, and the City Hospital remained as an unwelcome and neglected agency of the municipal government. Never-able to bring themselves to do away with the hospital altogether, the council nonetheless continued to search for ways to rid the city of this burden. 28

The 1839 epidemic also furthered the development of Boards of Health. When yellow fever disappeared late in 1839, the first Board of Health ceased to exist. With memories of the epidemic still fresh, the city council approved and ordinance in July, 1840 creating another Board of Health. 29 The text of this ordinance has not survived, so the duties and responsibilities of the Board can only be conjectured. If their duties were similar to other ante-bellum Board of Health
they kept watch in the city for dangerous conditions and reported their findings monthly to the city council. But that no epidemics occurred in Houston in 1840 suggests that they did nothing, for no records of their activities appear in newspapers or in the minutes of the city council. The only mention of them appears in June, 1841 when they tendered their resignations. A few days later, new members were appointed to fill their places. 30

The institutional status of the Board of Health is uncertain at this point. Seemingly, the Boards served terms of one year. But from mid-1841 until July, 1843 there is no mention whatsoever of Boards of Health in local newspapers or in the minutes of the city council. The informal, temporary, and perhaps unofficial character of these early Boards of Health is further suggested by an isolated report from the Board of Health to the city council on July 17, 1843 which complained that certain stables were a "nuisance likely to endanger the public health." 31

No action was taken on this report and no further mention of any Boards of Health appears in the minutes of the council until a year later. On May 20, 1844 the council moved to "create" a Board of Health with twenty-one members. Once more, nothing as to the Board's powers or responsibilities was specified. 32 Curiously, Boards of Health again drop from official or public notice until March 1846 when a new board of fourteen members is "created". 33

It is possible, of course, that these early Boards of Health had an institutional continuity and were more active than the available evidence suggests. More likely, in the absence of threats from yellow fever epidemics, these municipal departments withered away and assumed a more private and a less official character. The City Hospital too became less identified with the city government. By 1846 it
is being referred to as the "Charity Hospital." Going into dormancy did not, however, mean that these municipal health agencies would fail to come back to life during new emergencies.

The Mexican War increased the territory of the United States and produced a group of politically marketable heroes. In 1848, however, the soldiers who came back from Mexico through Texas ports carried with them more than military laurels. The first hints of trouble surfaced in May when local newspapers reported a serious outbreak of yellow fever in Tampico. By September an epidemic was spreading quietly in Houston.

Following the pattern set nine years earlier, citizens of Houston in 1848 were slow to admit the presence of yellow fever. By mid-September, though, it was becoming impossible to suppress the evidence. Rumors were already circulating in the interior about yellow fever in Houston, with serious economic consequences. Since the fever season coincided with the peak of commercial activity when crops and livestock were moving to market, Houston merchants did all in their power to stifle reports which diverted trade to rival towns. With the purpose in mind, the leading Houston newspaper devoted front-page space to an examination of the health of the city:

We understand that reports have gone abroad through the country that the yellow fever has made its appearance in Houston. This report probably originated from the fact that several persons have died suddenly at the Columbia Hotel.... It is true that several persons have died at this house within the last three weeks. We have been informed by a physician who attended them that the cases were of a very malignant character, but none of them assumed the true yellow fever type. The house is situated close to the Bayou, directly under its bank, and it is supposed that the pestilential vapors
arising from the Bayou, or some other local cause operating on the patients, changed their symptoms from the ordinary billious or remittent to a more malignant type. The cases that have occurred are confined to the immediate vicinity of the bayou. We believe the physicians still regard them as bilious or remittent fevers.36

The editor agreed that the appearance of genuine cases of yellow fever would be justification enough for visitors and their trade to avoid Houston. But it was highly unlikely that the disease would appear in the city if the Board of Health was supported in its efforts to improve the sanitary condition of Houston.37

We have noticed with pleasure that the members of the Board of Health are actively engaged in removing nuisances from the several wards of the city. We earnestly hope they will be effectually aided by the city authorities.38

A week later the newspaper was less confident that Houston would escape the clutches of Yellow Jack. Still reluctant to admit the presence of yellow fever, the paper noted that the number of "billious and remittent" cases was increasing, and were liable to assume a more dangerous form. While the work done by private citizens in spreading disinfectants was praised, the editors complained of the lack of interest among city authorities.

We earnestly hope they will imitate the example of those individuals and distribute lime, chloride of lime, or other disinfecting agents in every part of the city where filth has accumulated. It is needless to deny the fact, much sickness prevails in the city, and unless timely and efficient measures are adopted to improve its sanitary condition, the disease will assume a malignant character. If, however, proper sanitary measures are adopted, the sickness will soon abate.39

Toward the end of the month these hopes seemed to be coming true.

The local newspaper boasted of the rapidly improving health of the city and attributed this to the activities of the Board of Health. Houston residents were assured that
this terrible disease was no longer "the pestilence that walketh in darkness." Its sources were known and wholly within the control of human agency. The editor suspected that there probably had been a few cases of true yellow fever in the city, although physicians were not agreed on this point. The important thing to remember, though, was that the "sanitary measures which have proved so effectual in checking the disease should not be abandoned until the thermometer indicates a temperature of 36 degrees, or a frost appears."  

All of this, unfortunately, reveals little about the organizational structure of the Board of Health. The minutes of their meetings printed in the local newspaper lists nineteen members, but nothing as to their responsibilities or powers is indicated except that they removed nuisances and supervised the spreading of disinfectants. Other reports from their meetings leave uncertain the official relationship of the Board of Health to the city council. During the 1848 epidemic the Board of Health advised people to stay away from Houston and purchased disinfectants. Yet where they received the money and authority for such actions is not clear. The Board also recommended to the city council that a saw mill on Buffalo Bayou be compelled to remove rotting logs from its premises. But that the council refused to act on this request leaves clouded whether or not the Board of Health was anything more than an improvised committee with powers only to make recommendations.

Whatever the status of the Board of Health may have been, Yellow Jack was in top form. By October the epidemic had worsened. Hitting hardest the unacclimated German immigrants, by November yellow fever claimed from a population of less than 3,500 nearly three hundred victims. Statistics of the epidemic are sketchy, but there were probably more than 2,000 cases of yellow
fever in Houston from September until the first frost on the ninth of November. Yet all of these epidemics produced little recoverable information about municipal health agencies. Board of Health appear as shadowy forms, reporting occasionally to the city council, spreading lime, and searching out nuisances. Nothing about their composition, organizational structure, tenure, powers, or duties is known. Only in 1861, and then from indirect sources, does additional evidence surface about institutional health in Houston.

Passed as a comprehensive health ordinance, the 1861 measure reveals for the first time steps taken by the city council to protect Houston from the ravages of yellow fever. The first action section of the ordinance made it an offense punishable by a fine from five to ten dollars for any resident to permit his property to become unclean.

The ordinance made it a duty of the mayor to appoint three citizens from each of the four wards of the city to serve as the Board of Health. Their terms were for one year. Members of the Board had the duty to seek out any nuisance to the public health in Houston, and were privileged to enter the houses and outhouses of the city to inspect their condition. They could order removal of any substance and require any steps necessary to promote cleanliness.

Another ordinance, passed December 21, 1861, concerned the City Hospital. A lot and building were provided; they mayor had the exclusive right to admit patients. The city council elected annually a physician and steward for the hospital. When cases of small pox or yellow fever were presented for treatment,
the physician was to care for them in a special building, which came later to be
known as the Pest House. The physician was instructed to keep careful accounts
of the "moneys and effects" of patients admitted to the hospital, and was required
to report the information to the city council. That the council was still anxious
to avoid the financial drain of the hospital is suggested by another section in the
ordinance. Where convalescent, patients were required to perform any work deemed
proper by the physician to pay at the rate of one dollar per day for treatments they
may have received.

These health and hospital ordinances were supplemented by other ordinances
passed in 1864–1865. The first made it illegal to dig or disturb the earth or raise
floors during the fever season; the other regulated the operation of tenements and
boarding houses.

From this, it would seem that the Board of Health and City Hospital were
finally on firm institutional footing. Actually, the development of these municipal
agencies was by 1865 only beginning. It would take three more serious yellow fever
epidemics, a cholera scare, an economic depression, and the maelstrom of Recon-
struction politics to bring Boards of Health and City Hospital to a position enabling
them to materially improve the health of Houston.

The ante-bellum development of health agencies in Galveston paralleled
that of Houston. Boards of Health were acted as temporary committees and usually
functioned only during emergencies. Dislocations and demands of civil war,
however, accelerated the development of municipal health agencies in both com-
munities. Houston and Galveston were still far removed from godliness, but their
residents were beginning to realize that cleanliness lay next to their commercial
future and prosperity. No longer an unimportant swamp village on the edge of a bleak frontier, Houston after the Civil War formed the center of an expanding railroad network. As commercial leaders lent support to policies that would reduce the disruptions caused by rumors and ravages of epidemic yellow fever, the problems of guaranteeing Houston's health took on an important new dimension.  

Business leaders in Galveston, though still opposed to quarantines, came to similar positions of support for municipal health and sanitation programs.

After the crushing epidemic of 1867, however, Galveston merchants abandoned all opposition to quarantine policies on beliefs that seasonal disruptions of trade were much less costly than the long-term effects of epidemics. The 1867 calamity was also instrumental in encouraging municipal authorities to abandon narrow interpretations of their constitutional abilities to meet threats of contagion. Under strong pressure from physicians who came increasingly to dominate the administration of health agencies, city officials moved toward more effective sanitation and quarantine policies. During the 1870's health officers in Houston and Galveston were given broad powers to remedy unsanitary conditions and to compel enforcement of sanitary ordinances through Recorder's courts. But always the formulation and execution of such measures were keyed to yellow fever concerns. Under these fears, municipal agencies in Galveston and Houston came to broad interpretations of their latitude for action within wholesale delegations of state police powers.

Consider the abatement of nuisances by the Galveston board of health in 1878. Land owned by residents was dealt with easily. Health inspectors reported the existence of unsanitary or poorly-drained lots to the board of health, which in
turn notified property owners. Fines were levied against those who failed to improve
the sanitary condition of their property. The substantial amount of property owned
by non-residents, however, presented a serious obstacle. In the past, boards of
health had been unable to abate nuisances on such property unless the city offered
to pay for the work. The recorder's court did not have jurisdiction over non-residents,
and early in 1878 that court ruled that agents of non-resident property owners could
not be held personally responsible for nuisances. It was therefore necessary for the
board of health to act against the property itself. Before the fever reports of July,
1878, James T. Masterson, the city attorney, informed the board of health that he
was uncertain as to the legality of remedying conditions on the land of non-residents,
even if the city volunteered to pay for the expenses involved. By September, when
yellow fever was killing 200 people every day in Memphis, Masterson had recon-
sidered his estimation of the state police powers delegated to Galveston. On
September 13, he issued an opinion which recognized the authority of the board of
health to condemn the unsanitary property of non-residents. If no improvements
on the property were made after the board of health had notified the owners by
mail, the land could be sold at public auction. "Some members of the city council,
Masterson explained, "have voiced doubts about the legality of this condemnation
policy. But I do not think that we shall have it challenged in our recorder's court
by persons living outside the state. The times are too dangerous. Besides, with
Yellow Jack as amicus curiae, our position is especially strong." Armed with
these new powers, the board of health quickly condemned over twenty square blocks
of Galveston. Within weeks, all but three of the city's non-resident property owners
had their lots in a satisfactory condition. As the city attorney had predicted, none
were willing to risk their lives by coming to Galveston to contest the proceedings. In the three instances in which non-residents failed to respond to the notification of condemnation and sale, the property was auctioned off. The money from these sales was used by the board of health to abate nuisances throughout the city. 62

Two cases of the 1880's illustrate how entrenched this interpretation of state power plentitude had become. In one instance, members of a municipal board of health suspected that a woman and her three-month old child had contracted smallpox. During a severe rainstorm, the board of health, with the assistance of a group of armed vigilantes, moved the women and child outside the city limits in an uncovered wagon to a tent that had no stove or fire. The woman and child died, though not of smallpox. Relatives of the family sued the city for damages of wrongful death. In 1885, the state supreme court decided in favor of the city. The court declared that "the right of a city council, acting under legislative authority, to enact and enforce an ordinance providing for the removal from the city limits of persons afflicted with contagious disease is not to be questioned." Although it is true that the circumstances of this case are extreme, the horizons of police powers must not be narrowed. "Because it is through their delegation to counties and municipalities that we owe the security of our lives and health." 63

Two years later another representative case arose out of the over-zealous activities of a municipal health officer. The health officer, suspecting the presence of smallpox in a house, placed a guard to keep the occupants inside until they could be safely removed outside the city limits. Several hours later, the health officer, thinking that the occupants had already been carried outside the city limits, set about to burn the house. Unfortunately, the family who lived in the house knew
nothing of any of these proceedings, and the wife and four children barely managed to escape. The father, however, and an infant he had tried to rescue, were killed. The family sued the city government, but to no avail. In 1886, the state supreme court again supported a remarkably wide interpretation of state police powers. In a collateral report, the court declared: "Although municipal officers are ordinarily bound by standards of prudent care and reasonableness, this state's long and unhappy experience with epidemic yellow fever has left a powerful legacy. We are not disposed to change that legacy or to interfere with the powers of city governments to promote the health and welfare of their residents. It has long been settled law in this state that matters affecting the public's health demand that municipalities be left free to act as they see fit. The state has delegated its police powers in this regard to counties and cities. We will not reduce those powers." 64

By the 1880's, of course, health concerns in Galveston and Houston were enlarging beyond epidemic yellow fever. The state of health and sanitary conditions in these cities still needed great improvement. Witness the proud report of Galveston's Board of Health on June 1, 1878, that the city was cleaner than at any time in its history, as evidenced by the fact that removed during the past month from the downtown area were "only 784 loads of trash, 205 loads of slop, and the dead bodies of 313 dogs, 220 cats, 1258 chickens, 1 horse, 1 hog, 1 calf and 220 rats." 65 However, during the 1880's, as such work continued, problems of pure food and water supply became to be seen as more important than yellow fever which, after 1878, never again reached epidemic proportions in Galveston or Houston. But attention to these new priorities, and the achievements made toward improving public health owed much to the legacy of yellow fever. In coming decades, Galveston
and Houston would rely heavily on this legacy of constitutional adequacy to meet new challenges of expanding and swiftly changing urban environments.
IN DEVOTION TO INTERESTS OF THE PROFESSION

In his 1905 Presidential Address to members of the State Medical Association of Texas, Dr. F. E. Daniel surveyed the profession's condition and, as had most of his predecessors, noted with disappointment unsuccessful attempts to secure regulatory and public health legislation. Immediate prospects for such legislation were not good. "In the existing state of legislative sentiment," Daniel said, "we would do as well to ask them to abolish the moon." Daniel viewed hopes for control over membership and standards of the profession through a state board of health as "utopian," and appeal to the Legislature as futile. The inextricably bound goals of effective regulation of the practice of medicine and public health reform on the state level, he said, "could ... never be realized until the [legislators' constituents] are awakened to a sense of the needless loss of life by preventable diseases and the sacrifice of life by the exercise of their boasted privilege of 'employing any doctor they want' ..." In order thus to awaken popular support, Daniel recommended that each county medical society sponsor lectures and newspaper advertisements on "the cause of sanitary science in its relation to the public health."

Dr. Ira C. Chase, Secretary of the Association, forwarded at the same meeting similar strategy as rationale for the organization's new publication. Proceedings and Transactions, published yearly from 1869 to 1904, Chase considered stale and inadequate in service to needs of the profession. Monthly issues after style of the July, 1905 Texas State Journal of Medicine, he felt, would have greater impact. The Journal's "chief aim and main achievement," he said, "will be the education and elevation of the masses of the profession to the place in thought and action where its
leaders now stand." Slower brethren could be oriented toward more activist posture if, for a few years, "...each member [of the profession] is constantly supplied with fresh facts and educational matter along lines of legislation, [and] public hygiene ...." "Monthly doses," Chase predicted, would make for a unified profession more informed, more competent, and more fully deserving of public support essential for legislative action. Soon, he was confident, "the awakened body politic will move."²

Heavy doses of comment reflecting concern for and containing information on legislative reform and public health were indeed to appear monthly in _journal_ pages throughout the Progressive Era. In other respects Chase's predictions were accurate. By the time that the world had been made safe for democracy, regular physicians in Texas had made substantial progress toward solution of legislative and medical problems given space in _journal_ columns. Membership of the Association grew dramatically from 297 in 1899 to over 3,800 by 1917, when 93 per cent of the state's regular physicians belonged. From a budget surplus of $400 in 1899, the Association's liquid assets by 1917 exceeded $25,000.³ Apart from enlarged membership figures and an improved financial condition, however, legislative successes demonstrate increased power and influence of the Association. In contrast to Daniel's pessimistic report, by 1920 the organization's President could boast that "not a single law asked for [since 1905] has failed to pass." These legislative achievements included a medical practice act, a state board of health, pure food and drug regulations, and medical education controls.⁴

Scholarly literature on the Progressive Era has acknowledged and devoted much space to consideration of the role of organized professionals in reform efforts.⁵ Leading Texas physicians during this period spoke and acted as did Progressives in
other parts of the country. Yet Texas physicians cannot be accurately character-
ized by survey hypotheses as status-conscious sons of Mugwumps or as members of
a militant new middle class animated by values of order, system, and regularity.
The reformist policies and rising professionalization of organized medicine in Texas
during the Progressive Era is more usefully accounted in terms of the profession’s
early development and of the close relation of that development to constitutional
and legal aspects of municipal public health programs.

The early history of organized medicine in Texas was one of weakness and
confusion. From the time of Anglo-American settlement to the turn of the twentieth
century, almost anyone in Texas could, and a great variety did, practice the
healing arts. The repeal in 1847 of licensing laws of the Republic, the virtual
absence of legal restraints on the practice of medicine from that time until 1873,
and the deficient character of regulatory legislation passed under the present
Constitution beckoned flocks of mesmerists, herb vendors, magnetic healers, hydro-
paths, chiropractors, eclectics, Thomsonians, homeopaths, chronothermalists, and
indianopathists. As the Association’s Committee on Medical Legislation reported in
1900, Texas had been and continued to be the "land of promise" for every kind of
"quack and charlatan and imposter [sic] in the known world," a "humbug's paradise"
where frauds and sectarians fattened on the superstitions and desperate hopes of
defenseless citizens. Throughout the nineteenth century, doctors of the people and
the ignorance upon which they flourished were formidable obstacles to the efforts of
organized regular physicians to secure legal controls over the membership and
standards of the profession. As a 1905 _Journal_ editorial complained, "we are now
probably in the midst of more uneducated 'doctors' than any State in the Union."
The Physicians' Registers in District Clerks' offices will, for many years, look like a police record. 6

In his 1853 Presidential Address to the newly-formed Texas Medical Association, George Cupples described the social standing of the state's physicians as being "lower than in any other country in Christendom." Attributing this condition to charlatanism, the "offspring of ignorance, general and professional," Cupples urged the Association to take corrective action by enlightening the people on the subject of medical quackery and by "forming and directing public opinion on the grand question of Medical Education." If satisfactory laws on these matters could be obtained, he thought, then the material interests of physicians and the lives of the people would be substantially and mutually benefited. Cupples recognized, however, that these objectives would not be realized until regular physicians overcame legislative indifference and popular hostility.

Viewing the lack of statutory punishment for homicide by quack medicines as official negligence "not less culpable than would have been the omission to decree a penalty for murder . . . by deadly weapons," Cupples criticized legislators for protecting their constituents' property while leaving their lives to the "mercy of any ignorant pretender to medical knowledge." Even more unfortunate, in Cupples' opinion, was that the people tolerated and encouraged such priorities. He complained that any attempt to regulate the practice of medicine encountered the standard replies that

this is the land of liberty, that every man is free to offer his knowledge and his skill for the [acceptance] of his fellow citizens as he is free to offer goods for sale; that it is anti-republican to exact by law any guarantee for
the competence of those professing to treat
disease; that free competition will always
suffice to establish the merits of the deserving,
the incompetence of mere pretenders.

Such notions, he felt, were plausible in theory, but destructive in
practice. Arguing that the relationship between doctor and patient ought to be
governed by more than terms of caveat emptor, Cupples stressed that people's lives
were jeopardized by having criteria for scientific legitimacy and medical skill deter-
mined in the marketplace. Convinced that the special nature of medical practice
demanded statutes regulating the licensure and education of physicians, Cupples
called upon members of the profession to work vigorously for the passage of laws
first, as would protect the people from the indiscriminate practice of medicine by
unqualified persons, and second, as would "secure to Physicians ... a uniform
standing worthy of their high vocation, by compelling them to acquire just claim
thereto."7

Convincing the people and their representatives of the benefits of and needs
for such legislation, however, proved exceedingly difficult. Accurately diagnosing
ignorance as a basic cause of professional ills was one thing, effecting a cure
through enlightenment of the people was quite another. For if the people were
obligated, for their own protection, to accept the official or institutional super-
vision of an individual's choice of doctor, then the people were so obligated, for
their own protection, to satisfy themselves that regular physicians could back claims
of superior science and ability with tangible results and demonstrable proof. The
problem, of course, was that for decades regular physicians could not meet popular
demands that esteem and favored treatment rest upon proven usefulness.8
Rival medical sects to which people were driven by the incapacities of regular physicians flourished mightily. Trade in quack remedies did also. Nothing so clearly illustrated popular mistrust toward the efficacy of treatments of regular practitioners than did the people's resort to self-cures and patent medicines.

Highly profitable sales in the 1840's were enjoyed by Dr. Hull's Worm Lozenges, which had "never failed to remove Worms from children or adults." As a newspaper advertisement proclaimed,

Children will cry for them, and eat them as they do candy. We suggest to all parents having children whom they suspect of being troubled with Worms to give these Lozenges a trial. The fact of their having cured upwards of 40,000 cases puts their efficacy beyond doubt.

Among the most popular of such medicines in Texas were Radway's Ready Relief, Radway's Regulators, and Renovating Resolvent. This triple threat combination cured on a money-back guarantee "Rheumatism, Fever, Mercurial Complaints, Chills, Chronic Diarrhea, Neuralgia, Headaches, Running Sores, Dyspepsia, and many other odd complaints, including Diseases of the Head, Sore Stomach and Kidneys, &c." Manufactured by a New York firm that advertised in adjacent columns its product, "Death on Rats," Radway's Relief, Regulators, and Resolvent removed all need for physicians by "equalizing the circulation." Another popular patent cure appealed to stronger constitutions. Circulars for Ayer's Cathartic Pills cried out in huge letters: "MEN THAT ARE MEN!!! These pills are the best Purgative Medicine ever discovered." The advertisement concluded with what users would likely have described as understatement. "You will but need to use them once to know it." Also much favored during the 1850's were
Dr. Thurston's Unrivalled Anti-Fever Pills, 
... the most permanent and lasting cure 
ever before offered to the Public for Billous 
intermittent and Remittent Fevers in all their 
modified forms, grades and complications, 
from the most violent and malignant attacks 
down to the simpliest, uncomplicated case of 
of Ague or Chills and Fever. 12

Those with more varied medical problems were personally commended by a Houston 
editor to use of

The Green Mountain Vegetable Ointment, "
The Great Anti-inflammatory Remedy of the 
New World." The editor testified to the 
ointment's powers to cure "Glandular Swel-
lings—Ague in the face—swelled Breasts and 
Sore Nipples of nursing women—Bronchitis— 
Tumors, Boils and Ulcers; Felons and Ring-
worms, Salt Rheum; Scald Head. Moreover, 
it was "an invaluable Dressing for Burns, 
Scalds and Drawn Blisters; Shingles; Erysipelas; 
Piles. Inflammation of the Eyes yield to its 
power immediately; all Bruises, Fresh Cut 
Wounds are cured with great rapidity; Fever-
sores and Scrofuling sores are soon changed 
into a healed condition, and frequently 
entirely cured. ... There is no medicine 
known that can surpass it in prompt and ener-
getic action. 13

Another popular quack remedy appealed to those suffering from less serious ills.

It is a common observation that there are more 
sufferers from debility, among Americans, than 
can be found among any other civilized nation. 
The reason is obvious. We take too little 
exercise, and forget the wants of the body in 
the absorbing pursuits of business. In all such 
cases, ordinary medicines can do little good. 
What is required is just such a tonic and invigo-
reator as Dr. J. Hostetter has given to the world, 
in his Celebrated 'Bitters.' The weak and nervous 
denizen of the countinghouse, the exhausted 
toiler upon the shop-board, and the prostrated 
student of the midnight lamp, have found a
wonderful regenerator in the 'Bitters,' and
prefer it to more pretentious but less efficacious
medicines. But it should not be forgotten that
the agent which is so magical in its influence
upon a frame which is merely debilitated, is
equally powerful in assisting nature to expel
the most terrible forms of disease. Who will
give it a trial? 14

Patent medicines and snake oil hucksters, of course, were familiar features
of nineteenth century American life. 15 Yet their great popularity in Texas serves
as reflection of the public's lack of confidence in regular physicians and their
treatments. For however much regular physicians complained of the public's greedy
appetite for quack remedies, they were unable for decades to explain why people
taking patent cures fared as well as those getting bled, blistered, toniced, and
purged. As one Galveston physician noted in 1864, "It cannot be denied that
through our incapacity we being misery on ourselves, ... driving the people to
charlatans ..., from whom they seek relief we will not promise and cannot pro-
vide." 16

Epidemic disease, especially yellow fever, seriously complicated problems
faced by regular physicians in convincing the public of their worth and usefulness.
Totally baffled about the etiology of the disease, physicians quarreled bitterly over
yellow fever's cause, means of transmission, and cure. Especially damaging to
prestige of the profession were disputes over the effectiveness of heroic methods of
treatment. Confused and divided, regular physicians were highly susceptible to
pressure from commercial interests who wishes to suppress news of Yellow Jack's
appearance. Consider actions of Galveston physicians during the 1864 epidemic.
The first victim died on August 15 with the dreaded "vomito negro." As late as mid-
September, however, and after over two hundred fatalities, Galveston merchants were still sending circulars to the interior which denied presence of the disease and which were signed by leading physicians. After the epidemic, a Galveston physician complained bitterly of the lap-dog posture of his colleagues. With the support of the business community, he charged, leading physicians had "continued to deny the existence of yellow fever, or the existence of any symptoms partaking in the least of [its] character." Cards ... were published in order to 'disabuse the public mind' from such a foolish thought. Notwithstanding these denials, death continued its havoc among us, claiming daily new victims for the sepulchre, and strange as it may seem ... all interments [during August and September] were officially listed as 'congestion of the brain.' [By October, however,] the epidemical character of the disease became so fearfully apparent that no further denial could be made, and hence there were no more deaths from 'congestion of the brain.'" The physician continued:

It seemed strange that such apathy and indifference should be exhibited on a subject of such vast moment, and that such a diversity of opinion should exist among those familiar with the disease. I claim that any attempt to suppress the truth, or conceal the existence of a terrible epidemic, is highly censurable. It detracts from the profession by lowering its proud and noble dignity, and by a loss of confidence in the integrity, or a want of ability in the practitioner. Bowing to such commercial pressure injures the reputation of a city and brings odium and distrust upon its inhabitants. Had my suggestions been carried out, doubtless many valuable lives would have been saved by enabling hundreds who had come here from the country to remove themselves beyond the sphere of its contaminating influence.17

These disclosures and self-criticism widely circulated in interior newspapers further
undermined waning public confidence in the profession.

With the overwhelming yellow fever epidemic of 1867, the status and influence of physicians in the coastal region reached their lowest point. From these depths, however, recognition grew that an effective counterattack against yellow fever, sectarians, and popular hostility could only be made by convincing demonstration of the profession's worth in the public health arena, where their medical principles could be translated into public policy. As one Houston doctor confided to his diary in 1873,

Though I should hesitate to say this publicly [sic], it is my firm belief that the ultimate effects of yellow fever will be seen as beneficial. The shafts of death presently fall thickly among us. But through their terrible effects, yellow fever epidemics in this state have enhanced opportunities for professional advance by expanding the role of laws in medicine. For these effects I am grateful. Medical advice without the positive means of governmental implementation means nothing, either to the public's health or to the interests of the profession. The career of Yellow Jack in this state, it seems to me, has done more than anything else to impart vitality to medicine and useful power to its practitioners by giving emboldened force to the law.

The career of Dr. George W. Peete, Galveston's Health Officer from 1869 to 1875, illustrates the effectiveness of this strategy of enhancing professional stature and influence by public health service. The sharp decline in the incidence of yellow fever after 1878, though not attributable to enforcement of public health measures, demonstrated in terms the people could understand the superiority of regular physicians' principles over those of sectarians. In 1859 the Galveston Daily News often complained that the

...amount of death and disaster in the world would
be less, if all disease were left to itself than it now is under the multiform, reckless and contradictory modes of practice, both good and bad, which practitioners of adverse denominations carry on their differences at the expense of their patients. 20

By 1879, the same newspaper was voicing strong support for the attempts of 'public health guardians' to eliminate frauds and secretarians from medical practice. The Daily News commented:

We may be styled goose, goslin or quack, quack, quack, but we shall certainly prescribe a remedy for a species of vermin which infests our country, distinguished by the once august title of Doctor. These pseudo "M.Ds" or "Drs" are, we sincerely believe more dangerous than the hostile Indians, and not considerably less numerous. Certainly more brave men have fallen under their hands, than the rifles of the ... Commanches ever reached. We had rather at any times see a company of armed Mexicans in battle array, than a squad of these grave gentry, parading with their "Pandora boxes" in the shape of pill bags— which are seldom opened without entailing on the community disease and death. Dealing "damnation round the land" by various infernal compounds, ... they appear to prescribe poison for rats and poison for men as beings on an equal footing. Some of these imposters have acquired the honorable title of doctor merely by the simple process of emigration and distinguished by the fast fund of medical knowledge acquired in a livery stable, cook shop or tan vat; they decide upon the morbid state of the human system, and the qualities of reagents, mineral waters &c. with all the confidence of a Stillman ... Our government being now too poor to apply the remedy [of banishing quacks] from every town, we prescribe the following: Establish in each county of Texas a medical society, composed of regular graduates of medical colleges of the United States, for the purpose of examining and licensing all persons duly qualified to practice medicine. Being
ourselves so strongly bound by ties of indebtedness to the noble and genuine sons of Escolapius who have so effectually guarded our fair city from the ravages of yellow fever, we assure them that our columns shall ever be open to statements in support of their efforts to restrict their art to those physicians regularly licensed to practice medicine. 21

The successes enjoyed by physicians in Galveston and Houston in campaigns to promote professional interests by protecting the public's health contrast sharply with failures of the state Association to gain similar benefits and privileges from rural legislators. Since time of its reorganization in 1869, 22 the state Association had devoted much energy to lobbying for more adequate medical practice acts. One factor limiting the effectiveness of the Association's campaign to secure enforceable regulatory statutes was disagreement within the profession about the wisdom of any medical legislation at all. Speaking in 1886, E. P. Becton, President of the Association, acknowledged that he differed from a majority of the members in being wholly opposed "to asking for any legislation in behalf of the medical profession." "The educated physician," he felt, "needs no protection, except such as the law gives every good citizen."

Quacks cannot be suppressed by legal enactments. ... Vile imposters and pretenders are found in the pulpit, at the bar, in politics—everywhere; and every effort to rid our profession of them and to elevate the standard of honorable medicine by legislative enactments will prove abortive. ... If the people want protection from quacks, pretenders and irregular practitioners, let them ask for it; let them invoke the aid of this Association, and it will be cheerfully accorded. ... This Association cannot afford to knock at the door of the Texas Legislature until that body has learned to appreciate the honor, dignity and purity of the medical profession and the value of human life. 23
Becton concluded that any effort that we might make in behalf of the people would, as it had in the past, be misconstrued as an attempt to create a monopoly and would be treated with contempt.

Four years later, in a paper on "Our Troubles As A Profession--Their Cause and Cure," given at the Association's annual meeting, C. M. Ramsdell perceptively argued that the profession's quarrels over the efficacy of medical legislation were not directed to the single issue of overriding significance: public support gained through efforts on the public's behalf. Describing the "fair body of medicine" as being "infested by parasites, disfigured by ulcers and tumors, warts and excrescences," Ramsdell insisted that the only lasting cure for these "deforming growths" of fraudulent doctors, their patent medicines and secret remedies had to depend on the enlightenment of the people. In terms similar to Cupples' 1853 Presidential Address, Ramsdell asserted that by educating the physician the profession would more fully merit and receive public esteem and support. "While things continue as they are now," he said, "the people are the sufferers. Being ignorant they prefer quacks, seeing little distinction between them and lawful practitioners, and being ready to believe the former in their loud claims for superiority." The matter of pre-eminent importance was education as a means to secure the confidence and good will of the public. "If we, who claim to hold the oracles of wisdom, can educate the people so that they will, by the laws they make, compel the proper education of their physicians, then the problem will have been solved." According to Ramsdell, this was the important distinction that had been overlooked. Solution to the problem, and a cure for ills of the profession would come from the people, not from the law directly.
At the annual meeting of the Association in 1900, J. B. Massie took up Ramsdell's theme. He appreciated the immense effort that had been expended in seeking legislative relief. But he felt that such efforts had been pointed in the wrong direction.

The attack has been made against the officials who are in power and whose business it is to execute the laws that have been made. The efforts have not been directed against the people who make the laws, ... nor the people ... whose views the lawmakers exemplify.

Massie felt that the "efforts of this Association should be directed to an education of the people.... "Until this campaign of education was thoroughly complete, he thought, laws could not be changed. Legislative committees would do well to attend carefully to examples set by those in the profession who directed municipal public health apparatuses, as popular support and legislative backing could only come from demonstrations of proven utility."

In the following decade, leading members of the Association took this advice and vigorously and effectively pursued Massie's recommendations that they gain competitive advantage in the marketplace before seeking legislative confirmation. Implementation of this strategy developed primarily in coastal cities from the 1870s and 1880s was so thorough that by 1914 Association leaders began to fear public reaction against too much success. The state organization had managed co completely to dominate the practice of medicine in Texas that one Journal editorial suggested that county public health societies be created and delegated responsibilities. "And why not? There is work enough for all to do on the public's behalf, and the state organization has been for so long harping on the public health string that its music
has all but ceased to attract attention—if, indeed, it does not arouse suspicion."

Besides, the editorial continued, "no one could charge such local and decentralized
societies as this with ulterior motives." The local societies, after all, would comprise
much the same personnel now directing public health campaigns.²⁶

The the end of the Progressive Era, of course, application of bacteriological
discoveries and improved techniques were sufficient of themselves to demonstrate
superiority over quack remedies and irregular physicians. The same practical appreci-
ation of tangible results that had earlier driven the stature of physicians as a class to
the depths was beginning now to raise the prestige and public esteem of doctors to
unprecedented heights. Public health campaigns became less important to interests
of the profession as scientific and technical solutions to problems of mass health
control appeared. Adequate state-wide public health programs, to be sure, were not
fully developed in Texas until the early 1940s.²⁷ But fundamental goals of the pro-
fession were secured. The Journal heading "Devoted to the Interests of the Medical
Profession and Public Health"²⁸ was thus not a mere truism or empty slogan, but
rather the conscious expression and acknowledgement of a reform strategy which
served during the Progressive Era as it had in coastal cities since the 1870s to
enhance the interests of the profession and to protect the health of the public.
CONCLUSION

With turn-of-the-century discovery of the mosquito's role in spreading yellow fever, the crisis atmosphere generated by epidemics largely disappeared. By the time an active state health agency began to function in 1909, yellow fever posed merely technical questions concerning eradication of the vector insect. Yet Yellow Jack left a powerful and enduring legacy. Apart from its demographic and social impact, the disease's ravages profoundly affected conceptions of cities' adequacy to cope with emergencies, and influenced the character and velocity of medical professionalization in the state. Delegated state police powers that had served effectively in public health programs found use in a broad range of problems concerning reform and social control in rapidly expanding urban environments. As example, many early racial segregation ordinances in Texas coastal cities were passed under the guise of public health regulations. Such innovative applications, of course, were not based upon express constitutional or statutory provisions on permissible ranges of police power utilization and authority.

Note that before 1875, constitutional provisions relating to public health in Texas were embraced in general welfare clauses. The first explicit mention of public health appeared in article sixteen, section thirty-two of the 1875 constitution which empowered the legislature to establish a state board of health of "health and vital statistics." Such an agency, though, did not function until 1909. During the nineteenth century the state's police powers in matters of public health were delegated, without commensurate provision of budget or personnel, to county governments and
municipal corporations. As late as the 1870's, state legislators were far more concerned about the threat of Comanches on the frontier than about the danger of Yellow Jack on the coast. It is revealing of the character of the times, perhaps, that the depravations of paltry bands of moth-eaten Indians should have loomed larger in the public mind than tens of thousands of yellow fever victims. In 1870 there were twenty companies of Texas Rangers, a state militia and a cordon of federal forts to guard against Indians. In the same year, the only defense of the state government against Yellow Jack was the nip of frost in the air. Only after the state's tenth major epidemic was well under way were these defenses improved in June, 1870 by passage of legislation authorizing the governor to declare quarantines on the coast.

The new law enabled the governor to quarantine by proclamation the coast whenever and for such a length of time as he felt necessary. Local authorities were required after the proclamation to establish quarantine stations manned by a competent physician as the health officer. These local health officials were authorized to stop and inspect all vessels coming from infected ports. Permitted to use force if necessary, the health officer at the local quarantine station could detain the vessels as long as the governor's proclamation remained in force. The law further stipulated that any vessels arriving at quarantine stations and found to be infected could be seized and the captain deemed guilty of a misdemeanor. The fine upon conviction was from one to ten thousand dollars. But more importantly, the act provided that in order to facilitate the speedy trial and adjudication of such cases, the Mayor's Court or Justice's of the Peace courts were to have concurrent
jurisdiction with the state district court. When any ship attempted to slip by the quarantine the crime was a felony punishable by a prison term of one to five years and a fine of $500 to $1000. Again, such cases were to be tried either in Justice of the Peace Courts or in state district courts.

The remarkable thing about this provision of the act was, of course, that Justice of the Peace courts were not qualified by terms of the state constitution to hear felony matters. That these local courts had in such cases concurrent jurisdiction with state district courts hardly lessens the suggestion that the legislature, with an eye to a speedy trial and adjudication, intended violators to go before capricious JP's. The thought of going before those guardians of justice who, though often in the wrong, were never in doubt, probably gave more pause to potential quarantine-breakers than the $10,000 fine. Perhaps the legislature had this in mind. More likely, and since the fines did not revert back to the Justice of the Peace himself, this provision of the act represented a rather poor attempt by the legislature to meet a complex and dangerous situation by overburdening a single law.

The expense of keeping and maintaining the quarantine was to be defrayed by a fee of fifty cents for each person on board vessels arriving at Texas ports. Any surpluses from this fee were to go to the state treasury, and any deficiencies were to be made up by a fund of ten thousand dollars appropriated by the legislature.

Whatever shortcomings the statute may have had on paper were easily matched by the inadequacies of the quarantine measure in practice. The statute had no effect at all in preventing ravages of yellow fever and it did
little to coordinate local programs. Moreover, the funding provisions of the act were supplemented by a statute passed August 13, 1870 which imposed a 7 tonnage tax on vessels at inspection stations. The legislature apparently felt that if the quarantine would not work it could at least be made into a paying proposition.

Chinks in the health armor of the state provided by quarantine laws of 1870 were painfully obvious. But three years later the state was deprived of even this meager defense from yellow fever. The tonnage tax amendment on the basic quarantine statute ran afoul of the judgment of the United States Supreme Court, and after 1873 the remaining valid and constitutional 8 sections of the state's first health laws fell into disuse.

The case Peete v. Morgan came to the Supreme Court on appeal from the Circuit Court for the Eastern District of Texas. Dr. George W. Peete was a competent and distinguished physician who served as Galveston's Health and Quarantine Officer from 1869 until his death during a Gulf storm in 1875. Charles Morgan, a citizen from New York, was a powerful railroad and shipping magnate who was instrumental in promoting Gulf coast trade and the Houston ship channel. During the Civil War this clever fellow made an immense fortune by building and selling ships to the federal government while operating a vast network of blockade runners between Havana and Confederate ports. By 1868 Morgan's shipping line was likened to a great "anaconda 10 coiled about the neck of the state." Morgan's virtual monopoly on shipping and wharfage enabled him to gouge out inequitable freight duties on Texas
merchants, and he fought a long and bitter duel with commercial interests in Galveston during the 1870's. At the height of the business season Morgan's ships from New York and Louisiana were often compelled to lay in quarantine twenty-five days each time they called at Galveston. Although he doubled his rates during the fever season, enforcement of the quarantine cut sharply into his receipts. Morgan believed that the principal motivation in declaring the quarantine was to enable Galveston merchants to clear their shelves of old merchandise before receiving new. Further, Morgan suspected rightly that a rival company of steamers, the Mallory line, promoted the quarantines in order to beat Louisiana competitors to Texas markets. The final insult came in 1870 when Galveston officials followed provisions of the new state law and imposed a tonnage fee on all vessels stopping at its quarantine station. With the charge that the fee was an illegal tax on interstate commerce, Morgan sought on grounds of diversity of citizenship in the district federal court to obtain an injunction to restrain collection of quarantine fees.

Morgan's attorneys argue that the collection of such fees was unconstitutional, in that only Congress had power to regulate commerce between the states. Attorneys for Galveston maintained that to make the law unconstitutional it must be levied as an import duty, and not as quarantine dues, for the purpose of gaining income. Citing cases where pilotage fees had levied and judged constitutional, Galveston attorneys further argued that Morgan had made no case for injunction. It was necessary, in their opinion, for Morgan to show absence of remedy at law. "The complainant's remedy at law is simple," they concluded, "he can let himself be sued for non-payment
and then protest illegality of the law." 12

The Galveston Daily News offered this comment on the decision in favor of the city:

Without any ill feeling against the Morgan Line, we cannot but express our satisfaction at the decision of Jude Woods, in refusing the injunction prayed for to restrain the collection of quarantine dues. The power of collecting fees for the inspection of vessels entering the harbor is a very essential, and would also seem to be a necessary incident to the power to enforce a quarantine at all. Owners of vessels, send their ships to this port for their own gain, and not for the benefit that may accrue to the people of Galveston. This being the case, it is but right that vessels should bear the burden of the expense their visits cause. On the other hand, it would be suicidal policy on the part of the city to levy so heavy a charge that it would deter vessels from entering the port on account of the expense. There would be but little wisdom in this. But there is a great deal in preventing vessels from bringing a death-dealing pestilence among us, we can very well spare the presence of Yellow Jack among us; and all precautionary measures tend to prevent infection from being disseminated from some plague-smitten ship, are simply the result of the instinct of self-preservation. Even now we read that the frightful epidemic that has devestated Buenos Ayres was carried thither by an Italian immigrant ship. That vessel was truly a messenger of death to tens of thousands. Better by far had it sunk to the death of the ocean ere it entered the harbor of the city to which it brought destruction.

Regarding quarantine dues, we have not the scale of fees at hand that is charged upon the different classes of vessels, but many complaints have been made to us, that it discriminates unfairly in favor of large vessels and presses hardly on the small craft that ply up and down the coast. This is a matter worthy of attention, and we would ask the authorities charged with the matter, to look into it, and endeavor to levy a just and equal scale of charges that will be fair to all. 13
Morgan appealed denial of the injunction request to the federal
district court where decision was reached on June 16, 1872. Reports in the
Daily News of the decision are the only extant records for the case.

An Important Decision.
The opinion of Judge Bradley in the case of Charles Morgan against Dr. Peete, the Health Officer of
Galveston, which we give below, is one of much importance to our city, and indeed to all seaports
where quarantine regulations are deemed necessary for the public safety. It will be seen that this
decision renders a nullity that part of the law
approved August 13, 1870, which authorizes fees
to be collected as follows:
"For every vessel of one hundred tons burden or
under, the sum of five dollars; from every vessel
over one hundred tons burden, the sum of five
dollars, and also a further fee of one and one-half
cents for each and every ton. The aforesaid fees,
collected as aforesaid, shall be reported to the
corporate authorities of the town or city at which
such quarantine is established, and all fees and
fines, as hereinafore provided for, shall be used
to defray the expenses of keeping said quarantine."
We understand that during the time Dr. R. K. Smith
held the office of Health Officer, the above fees
failed to meet the necessary expenses of the
quarantine by between $4000 and $5000 a year, while
the law has been honestly and economically enforced.
The average amount of every arrival of one of the
Morgan steamers, has been about twenty dollars.
Dr. Peete informs us that similar fees, though not,
perhaps, so large, are collected in all the seaports
that he is acquainted with where quarantine regula-
tions are enforced. We are glad to learn that the
City Attorney, Judge Sabin, has taken an appeal to
the Supreme Court, for it certainly is very singular
if such fees cannot be collected here if they are
collected in other ports.
In the United States District Court for the Eastern
District of Texas, Hon. Amos Merrill and Hon. James
P. Bradley, presiding: Opinion of the Court delivered
by Justice James P. Bradley, in the case of Charles
Morgan against George W. Peete, Health Officer,
on bill of injunction against the collection of quarantine fees. 'In this case we think that the charge which by act of the Legislature is authorized to be exacted from all vessels coming to the quarantine ground, namely $5, for the first one hundred tons and one and a half cents for each additional ton, is a 'duty of tonnage' within the meaning of the constitution, and that it is also an unconstitutional tax upon the commerce of the port. The States have a right to establish quarantine regulations for the preservation of the public health; but they have no right to place toll gatherers at the gateways of commerce and lay indiscriminate exactions upon all vessels that enter thereby. We think therefore, that the tax duty or fee which is complained of is unauthorized and void, and whilst the complainant might, by successive actions at law, recover the amount exacted, this court, as a court of equity, in order to prevent a multiplicity of suits, has a right to entertain a bill for an injunction. We therefore grant the injunction as prayed, with liberty to the complainant to enter a final decree for a perpetual injunction, if he elects to accept the answer without replying thereto, unless the defendant desires the usual time for final hearing.'

Galveston brought appeal to the Supreme Court, which rendered judgment in October, 1873. Justice David Davis read the Court's opinion.

Reviewing the state's powers to establish and maintain quarantines, Davis went on to discuss briefly the issues settled in the State Tonnage Tax Cases. The question before the Court as Davis saw it was whether a state could levy a tonnage tax on vessels owned in foreign ports, and entering her harbors in pursuit of commerce, in order to defray the expenses of her quarantine regulations. The Texas case lay well within the precedents of earlier decisions involving the Constitutional prohibition of tonnage duties and the Supreme Court affirmed decree of the lower court.
The state government did not involve itself with public health again until 1879. All during the 1870's the Texas Medical Association had strongly urged the creation of a state board of health. And in 1876 a bill came before the legislature which would have incorporated the medical association and vested it with the rights and duties of a state board of health. Also, the medical association as a board of health would have had the power to appoint and regulate subordinate boards. Although the bill had widespread support among regular physicians, it failed to pass the legislature. As discussed above, the Texas Medical Association was able to exert little influence on the statutory development of public health before 1900. The chief motivation of municipal health programs in nineteenth century Texas was the threat of epidemic disease. Action by the state government in 1879 was a response to the same fears. After one of the worst epidemics in the nation's history, and after the medical association had all but given up hope, the legislature passed in April, 1879 a new quarantine law.

Although the 1878 epidemic did no significant damage in Texas, its effects in other states were clear in pointing out that local quarantines were inadequate defenses against the disease. When rumors of yellow fever began to circulate in the spring of 1879, the legislature declared the existence of an "imperative public necessity", suspended the rules, and had the law take effect immediately.

The first section of the measure enabled the governor to declare quarantines on the coast and on the borders of Texas. The governor also was to appoint a qualified physician to serve as medical officer for the state. This
health officer would receive ten dollars per day when engaged in public duty and was required to post a bond of ten thousand dollars. Whenever reports of yellow fever, cholera or plague surfaced, the health officer was to check on their authenticity and declare in the governor's stead a quarantine if necessary. After consulting personally or by wire with the health officer, the governor would then declare a state-wide quarantine. The law did not, however, replace local quarantine regulations. The act merely provided that disputes arising among local quarantine authorities be settled by the state health officer.

After the quarantine went into force it was the duty of county and municipal officials to make it work. They were to set up and man quarantine stations, and to provide shelter and food for persons detained. Moreover, the local officials, who received the same ten dollars per day as the state health officer, were to help in the quarantine's enforcement. The law authorized county and municipal quarantine officers to administer oaths to suspected violators.

Judicial provisions of the act contrast sharply to the rigorous penalties of the 1870 law. Persons swearing falsely to the oaths administered by local quarantine officials were guilty upon conviction in a court of "competent jurisdiction" of a misdemeanor. No fines for this offense were specified. Recoiling, perhaps, from the notion of Justice of the Peace courts hearing felony cases, framers of the 1879 law made avoiding the quarantine or leaving a quarantine station without permission a misdemeanor punished by fines from $10 to $1,000. Again, such cases were to be tried in courts described only
as ones of "competent jurisdiction".

Minor amendatory statutes to this basic quarantine law were passed in July, 1879, 1881 and 1883. But the fundamental conception of health protection remained. Like frontier forts, quarantine laws were designed to guard against external threats. No attention was given to the internal security of the state against filth and disease. Only in 1883 was the situation changed by the passage of an act "to prevent the adulteration of food, wines, beers, fermented or distilled liquors". The State Health Officer (since promoted to capital letters, though his pay remained the same) was empowered to make rules, regulations, investigations and inquiries on the subject of pure foods and drugs. But in practice the law achieved nothing, because its enforcement depended solely upon the State Health Officer who was at best a temporary agent serving only in periods of epidemics and emergencies.

In 1891 a somewhat modified quarantine law was passed. It provided for the establishment of coastal quarantine stations and required county commissioners to appoint a "County Physician" after a quarantine proclamation by the governor. Still, there was nothing done to create on the state level a permanent public health administration with regular, full-time officials.

Throughout the nineteenth century, then, the state government's commitment to the health of its citizens consisted of vague constitutional promises, an unenforceable pure food act, and a few ineffectual quarantine laws. Aside from this flimsy facade of state protection, public health in Texas was the
responsibility of local governments and individuals. The legal development of public health, with the important exception of Peete v. Morgan, must therefore be accounted in terms of the formulation and enforcement of health measures on local levels of government. At these levels, epidemiological pressures were felt most intensely, and through the machineries of these governmental structures defensive measures operated with most enduring effect.
CHAPTER 1 - FOOTNOTES

\(^1\) Mading Collection, Jesse H. Jones Library (Texas Medical Center, Houston, Texas), DeCordova MS, uncataloged diary and journal of observations, personal financial accounts, weather reports and parish registers [February 12, 1869-April 20, 1878], unpaginated. The quotes are my translation of the French in the original. For more information on the contribution of meteorological charts to the study of tropical diseases see Domingos Freire, *Doctrine Microbiennne de la Fievre Jaune et Ses Inoculations Preventives—Rapport des etudes experimentales sur cette maladie presente au Gouvernement Imperial du Bresil* (Rio de Janeiro, 1885), pp. 299-301, 311, and 433. Freire, however, had not seen DeCordova's journal and knew nothing of the circumstances surrounding his death.


3See below, Chapter III.


Useful information on epidemic disease and other threats to health is contained in Erwin H. Ackerknecht, Malaria in the Upper Mississippi Valley, 1760-1900 (Baltimore, 1945); W. L. Coleman, A History of Yellow Fever—Indisputable Facts Pertaining to Its Origin and Cause (Chicago, 1898); Greensville S. Dowell, Yellow Fever and Malarial Diseases, Embracing a History of the Epidemics of Yellow Fever in Texas (Philadelphia, 1876); John Duffy, Epidemics in Colonial America (Baton Rouge, 1953); Eleanor A. Fay, "Thanks to Yellow Fever," United States

George R. Tabor, The 1903 Epidemic of Yellow Fever in Texas, and the Lesson to be Learned from It (Austin, Texas, 1905); and Henry Tooley, History of the Yellow Fever As It Appeared in the City of Natchez, in the months of August, September, & October, 1823 (Washington, Mississippi, 1823).


The historian, of course, is compelled to look back at the past through spectacles warped by the experience and cultural conditioning of the present. The distorting effect of these spectacles, as much as a lack of evidence and the fragmentary nature of surviving sources, leaves much of the past dark, unknown, and irretrievable. Sometimes, of course, the vantage point from the present enables one, as G. M. Trevelyan has written, "to know more in some respects than the dweller in the past himself knew about the conditions that enveloped and controlled his life." Frequently, however, the historian's ability to see in the past things invisible to contemporaries handicaps his understanding, for there is great risk in defining and interpreting the antecedent in terms of its consequences. Yet the value of much of
the scholarship on public health in the United States is undermined by such present-mindedness. A concentration on final results has given a teleological structure to many studies on public health. The foibles, false starts, and failures of public health programs have been either magnified into caricature or neglected altogether. Too often the practice in dealing with public health has been to prune away the dead branches of the past in order more fully to expose the green buds and twigs which have grown into the light of the twentieth-century world. And so while our knowledge of the main line of the medical and institutional development of public health in the nineteenth century is considerable, the illuminating offshoots of the subject to the broader, more important social, political, economic and legal aspects of the American experience have been shorn away by the myopic approach taken in much of the literature.

Witness the lack of any serious attempts to integrate information on public health into the larger context of urbanization. The first and foremost battlefield of public health was the modern city. Histories of public health before the Civil War make much of the example provided by English sanitary reformers. American parallels to the vile living conditions of the poor in England's teeming cities are carefully sketched, and the beginnings of health programs in both countries are correlated. Missing from these studies, however, are any probings of the relationship between public health measures and municipal police departments, or between the press of human aggregation and the enforcement of sanitary regulations. Moreover, little has been written of the influence public health programs in older, more industrialized American cities on nascent programs in younger cities in the South and West. When urbanization is treated at all, it is in a shallow, one-dimensional plane of mere increases in population. Nothing of demographic shifts or ethnic and racial concentrations is considered in the literature. Yet there is a great deal of the rate and patterns of urban growth in the nineteenth century to be explained by the blighting effects of filth, squalor and disease.


9 Bowditch, Public Hygiene in America..., pp. 55-56, and authorities cited above.

10 Consider statement of the United States Supreme Court in Northwestern Fertilizing Co. v. Hyde Park (1878) 97 U.S. 659: "That power belonged to the
States when the Federal Constitution was adopted. They did not surrender it, and they all have it now. It extends to the entire property and business within their local jurisdiction...."

11. In 1875 the Oregon Supreme Court offered the following definition of police power: "The name given to that inherent sovereignty which it is the right and duty of the government or its agents to exercise whenever public policy, in a broad sense, demands, for the benefit of society at large, regulations to guard its morals, safety, health, order or to insure in any respect such economic conditions as an advancing civilization of a highly complex character require." Stettler v. O'Hare, 69 Or. 519, at 531.


15. Quoted in Bowditch, Public Hygiene in America..., p. 430.


The following review is condensed from a more extended analysis presented at the annual meeting of the American Society for Legal History in Chicago in November, 1973, "To Promote the General Welfare"—Public Health Reforms and the Utilization of Delegated State Police Powers by Municipal Corporations: A Comparative Study of New Orleans, Galveston, Houston, Atlanta, Memphis, and Brownsville." Arguments and additional information contained in that paper are incorporated into discussions below, Chapter V.


Duffy, Sword of Pestilence: The New Orleans Yellow Fever Epidemic of 1853 (Baton Rouge, 1966), passim.

Gordon E. Gillson, Louisiana State Board of Health—The Formative Years, pp. 15-34.


See cases cited, 29 Corpus Juris 249, notes 10 and 17.


Memphis Tribune, April 21, 1873, quoted in Galveston Daily News, May 20, 1875.

See also Bowditch, *Public Hygiene in America...*, 256-258, and 360-362.

29 Charles Carroll Parsons Papers, University of Texas Archives, Austin, Texas, letter dated September 20, 1878.

30 See below, Chapter III.

31 Note discussion following, Chapter V.
CHAPTER II - FOOTNOTES


8 Ibid., pp. 294-299. Jones declares that "Hundreds of German immigrants entered Texas during the 1840's...hoping to find a healthy climate, and the natural blessings of their adopted hill country more than fulfilled their expectations." (p. 294). Compare the January 24, 1862 report of the Neu Braunfelser Zeitung: "The disease of the throat still demands its offerings [,] and ravages terribly among the children here. One hundred forty-seven children have died of the disease...; thirteen in January so far...Day and night [the doctor] is busy bringing help wherever possible." Note also below, p. , note 26. Jones sees railroads (pp. 296-297) as enlarging the health frontier, but does not acknowledge the consequences of railroads spreading epidemics. See James B. Speer, Jr., "The Impact of Railroad Technology on Health and Medicine in Nineteenth-Century Texas--Epidemiological Considerations," in Robert C. Hickey and Chester R. Burns, eds., The Legacies of Railroad Medicine to American Health Care (Galveston, 1974).


10 Quotes in E. C. Barker, ed. Texas History (Dallas, 1929), pp. 127-129.


12 Carl, Prince of Solms-Braunfels, Texas: Geshildert in Beziehung auf seine geographischen socialen und ubrigen Verhaltuisse... (Frankfurt, 1844), p. 28, my translation from the German, compare variant translation in Texas, 1844-1845 (Houston, 1936), p. 35. See also Amos S. Parker, Trip to the West and Texas... (Concord, N.H., 1835), pp. 154-155.

13 See Galveston Daily News, July 8, 1849, July 21, 1852, September 6, 1869, January 5, 1873, and June 6, 1875. Note also Clarksville, Northern Standard, September 15, 1849, Houston Tri-Weekly Telegraph, July 21, 1865, Houston Morning Star, October 28, 1843, Brazoria Brazos Courier, June 9, 1840, Matagorda Colorado Tribune, July 16, 1853, Galveston Wochenblatt der Union, August 8, 1869, and Belton Independent, October 2, 1858.

14 Texas Almanac for 1858 (Galveston, 1858), pp. 55-56.

15 Anonymous, MS dated May 2, 1836, in Texas Medical History Collection, Barker Texas History Center, University of Texas, Austin, Texas.


17 Marilyn McAdams Sibley, Travelers in Texas, 1761-1860 (Austin and London, 1967), p. 47 and following. Consider James W. Parker's 1848 comment: "...I can...say that there is not a country of the same extent that has more poor
land; that has a greater number of local causes of disease— that has more unseemly and disagreeable swamps and ponds, or that has more snakes, mosquitoes, ticks and flies than Texas." ibid., p. 49.

18 Quoted in Barker, op. cit., p. 143.


20 Austin City Gazette, June 3, 1840.

21 Hook to Palmerston, April 30, 1841; Hook to Aberdeen, February 8, 1845, letters in Ephraim Douglass Adams, ed., British Diplomatic Correspondence Concerning the Republic of Texas, 1838-1846 (Austin, 1918), pp. 33, 443.


24 ibid., pp. 96, 100.


26 For useful comments and supporting information see Rena Mazyck Andrews, "German Pioneers in Texas, Civil War Period," (Unpublished M.A. Thesis, University of Texas, 1929); Letter dated October 24, 1833 from Brazoria, in Asa Brigham Papers, Barker History Center, University of Texas, Austin, Texas; Bollinger to Evans, July 22, 1855, in Joseph Evans Papers, Barker History Center, University of Texas, Austin, Texas; Ernest K. Gruene, "A Short Account of the Founding of New Braunfels," M.S., Barker History Center, University of Texas, Austin; "Narrative," Sylvanius Hatch Papers, Barker History Center, University of Texas, Austin; Morgan to Storms, October 26, 1844, letter in James Morgan Papers, Barker History Center, University of Texas, Austin; and Rosalie B. Hart Priour, "The Adventures of a Family of Emigrants [sic] Who Emigrated to Texas in 1834—An Autobiography," typescript in Barker History Center, University of Texas, Austin. Note Sibley, op. cit., p. 166; and Julia N. Waugh, Castroville and Henry Castro, Empresario (San Antonio, 1934), pp. 39-40; William H. Oberste, Texas Irish Empresarios and their Colonies: Power and Hewelson, McMullen and McGloin, Refugio, San Patricio (Austin, 1953); Rudolph Diesele, The History of German Settlements in Texas, 1831-1861 (Austin, 1930); Don Brigger, German Pioneers in Texas (Fredericksburg, 1925); Terry G. Jordan, German Seed in Texas Soil (Austin, 1966); and Barnes F. Lathrop, "Migration into East Texas, 1835-1860," Southwestern Historical Quarterly, vol. LII (1946), pp. 293-312, vol. LI (1947), pp. 1-31, 184-208, 201-234.

28 Quoted in Carl of Solms-Braunfels, Texas, 1844-1845 (Houston, 1936), pp. 39-40.


30 October 30, 1843.

31 See comment in Houston Morning Star, August 3, 1849.

32 Note sources cited above, Chapter 1, p. , note 5.


35 Edwards, op. cit., p. 28.

36 See below, pp.


CHAPTER III - FOOTNOTES

1 Copy of circular in Galveston County Records Wharehouse Storage Annex, Galveston, Texas; author and publisher unknown.

2 Galveston Daily News, September 1, 1869. Monthly reports of Galveston's City Sexton in the Daily News were usually hidden away in the fine print of back pages. In late August, however, rumors about the existence of yellow fever in Galveston had begun to circulate in the interior. Prominent display of mortality statistics was calculated to squelch damaging fever reports.


4 Roueche', Eleven Blue Men (New York, 1968), pp. 91-92. I quote Roueche' indirectly in this paragraph and rely on his judgment for the following general review of smallpox.

5 Dr. Archibald L. Hoyne, quoted in Ibid., pp. 91-92.

6 Ibid., p. 92.

7 Ibid.

8 Houston Morning Star, February 13, 1844. For another expression of like concern, see LaGrange Intelligencer, March 28, 1844.


10 Houston Democratic Telegraph and Texas Register, March 21, 1851. See also Matagorda Colorado Tribune, March 15, 1851.

11 Georgetown South Western American, March 9, 1853.

12 Houston Telegraph and Texas Register, May 1, 1844.

13 Rosenberg, The Cholera Years, The United States in 1832, 1849, and 1866 (Chicago, 1962), pp. 2-3, and internal quotations as noted.

14 Ibid., pp. 3-4.

15 Ibid. R. Pollitzer, Cholera, passim.

16 Clarksville Northern Standard, June 3, 1849.
17 Lavaca Herald, July 16, 1849.

18 Rosenberg, op. cit., pp. 4-5.

19 See above, Chapter III.

20 Strode, Yellow Fever, pp. 116-117.


22 Ibid., p. 670.

23 Duffy, Sword of Pestilence, p. 83.

24 Ibid., p. 90-94.

25 See account, Houston Telegraph, October 16, 1867.

26 Strode, op. cit., p. 411.

27 Ibid., p. 388


30 See below, Chapter V.

31 Galveston Daily News, April 11, 1859.

32 Ibid., October 6, 1867.

CHAPTER IV - FOOTNOTES


3 I am following rather closely the suggestions set out in the uncompleted portions of Perry Miller's Life of the Mind in America from the Revolution to the Civil War (New York, 1965). My rather general statements on Jacksonian America have been composed from Edward Pessen, Jacksonian America—Society, Personality, and Politics (Homewood, Illinois, 1969); and Daniel H. Calhoun, Professional Lives in America—Structure and Aspiration 1750-1850 (Cambridge, Massachusetts, 1965).

4 I am quoting indirectly from Miller, Life of the Mind in America from the Revolution to the Civil War, p. 325. While not pursuing here a comparison of the legal and medical professions, I think it is important to note that in the constitutional and legal history of public health, the growth and development of the legal and medical professions turned about many of the same issues.

5 For excellent examples of this dialogue see Shryock, Medicine and Society in America, pp. 54-76.

6 A useful introduction to this problem is the first chapter of Bernhard J. Stern, American Medical Practice in the Perspectives of a Century (New York, 1945). One senses the scope of the problem from the early medical books and their reluctance to accept new ideas. For example, see Richard Reece, The Medical Guide, for the Use of Families and Young Practitioners in Medicine and Surgery. Being a Complete System of Modern Domestic Medicine; Exhibiting a Comprehensive View of the Latest and Most Important Discoveries in Medicine, Pharmacy, etc. (Philadelphia, 1808); William Buchan, Every Man His Own Doctor; Or, A Treatise on the Prevention and Cure of Diseases, by Regimen and Simple Medicines (New Haven,


10 For an index to what the "heroic" treatment could mean, see Benjamin Rush, *An Account of the Bilious Remitting Yellow Fever, As It Appeared in the City of Philadelphia, in the Year 1793* (Philadelphia, 1794). The debate over whether or not medicine was art or nature is more important than it may seem at first. The question of medicine being one or the other had great influence on controversies on all sorts of medical problems, from particular methods to treatment and diagnosis to general practices involving new drugs or techniques.

11 Miller, op. cit., pp. 324-326.

12 See below, Chapter VI.

13 For an excellent summary of these ancient theories and an analysis of nineteenth century practices, see John Duffy, "Medical Practice in the Ante Bellum

14For a discussion of the use of calomel in the South, refer to Duffy, *Sword of Pestilence*, pp. 150-152. Anyone concerned with nineteenth-century insanity might well investigate the impact of calomel because of that chemical's damaging, though unseen, neurological effects.


16Quoted in Dowell, *Yellow Fever and Malarial Fevers*, p. 84.


23*Austin Tri-Weekly Gazette*, June 1, 1868.


25*Nacogdoches Times*, March 18, 1848.

26Dowell, op. cit., p. 93.


CHAPTER V - FOOTNOTES

1 David G. McComb, Houston the Bayou City (Austin, 1969), pp. 3-4, 11 and 12.


8 Ibid., pp. 1538-1544.


10 Houston Weekly Telegraph, September 3, 1867. Health ordinances strong enough to create resentment, of course, appeared rather late.

11 See above, Chapter III.

12 Yellow fever appeared in Galveston and Houston with varying degrees of severity in 1839, 1844, 1847, 1848, 1853, 1854, 1855, 1858, 1859, 1862, 1864, 1867, 1870, 1873.

13 The term is one of my own invention. What I mean to suggest by "reverse laissez-faire" is that the local governments were content to let the people alone if the compliment would be reversed.
Railroad schemes were the most common, but in one sense the ship channel, gas illumination, and street railways also qualify.

Houston Telegraph and Texas Register, March 13, 1839.

See Ashbel Smith, Yellow Fever in Galveston, Texas, 1839—An Account of the Great Epidemic (Galveston, 1839).

Houston Telegraph and Texas Register, September 4, 1839.

Ibid.

Ibid.

(Houston) Morning Star, October 12, 1839, Houston Telegraph and Texas Register, October 20, 1839.

Houston Telegraph and Texas Register, October 30, 1839.

Ibid. The newspaper apparently did not see the inconsistency of this position.

(Houston) Morning Star, November 15, 1839, Houston Telegraph and Texas Register, November 6-20, 1839.

Houston Telegraph and Texas Register, November 27, 1839.

Minutes of the City Council of Houston (City Secretary's office, Houston), volume A (1840-1847), p. 31.

Ibid.

Ibid., p. III.

Even as late as the 1870's the city council was searching for means to evade the responsibility of the hospital expense.

Minutes of the City Council of Houston, volume A, p. 34.

Ibid., p. 107

Ibid., 110.

Ibid., p. 231.

Ibid., p. 271.
34 Ibid., p. 316.
35 Houston Telegraph and Texas Register, September 23, 1846.
36 Ibid., May 18, 1848.
37 Ibid., September 14, 1848.
38 Ibid.
39 Ibid.
40 Ibid., September 21, 1848.
41 Ibid.
42 Ibid.
43 Ibid.
44 Ibid.
45 Democratic Telegraph & Texas Register, September 28, 1848.
46 Statistics of cases and deaths from the yellow fever epidemics are difficult to come by. These estimates appeared in the New Orleans Medical Journal (1848), reprinted in the Democratic Telegraph & Texas Register, October, 19, 1848.
47 See above, note 39.
48 The informal and temporary nature of these Boards of Health were apparently thought to be relatively unimportant by contemporaries because the newspapers mention them rarely and the public seemed to be little disturbed or concerned about their activities.
49 Houston City Directory for 1866 (Houston, 1866), W. A. Leonard, comp., pp. 65-66.
50 Ibid.
51 Ibid.
52 Ibid.
53 Ibid.
54 ibid.

55 ibid.

56 ibid.

57 ibid.


65 *Galveston Daily News*, June 2, 1878.
CHAPTER VI - FOOTNOTES


2Ibid., p. 20.


7"Presidential Address, 1853," Mading Collection, Jesse H. Jones Medical Library, (Texas Medical Center, Houston, Texas).


9LaGrange Intelligencer, May 6, 1842.


11Belton Independent, September 11, 1846.

12Clarksville Northern Standard, March 2, 1853.
13 Houston Age, March 31, 1857.

14 Galveston Civilian, August 5, 1855.


16 William C. Chambers, letter dated July 13, 1864, in Chambers Papers, Barker Texas History Center, University of Texas, Austin, Texas.

17 Galveston Daily News, December 12, 1864.

18 Miles S. Bennet, journal entry dated October 20, 1873, Bennet papers, Barker Texas History Center, University of Texas, Austin, Texas.

19 See supra, pp.

20 November 12, 1859.

21 January 4, 1879, and compare similar wording in Houston Telegraph and Texas Register, June 24, 1837.


Efforts to obtain formal legal remedies for ills of the profession were similarly unsuccessful. Malpractice suits seemed to offer one means of restricting the activities of unqualified practitioners, but proved ineffective in the early decades. In his 1853 address to the Texas Medical Association, Cupples had complained about the dead letter common law provisions for malpractice, and urged the profession to seek legislation on the subject. Yet while the idea of such actions had wide appeal among regular physicians, virtually nothing was done to encourage malpractice suits before the Civil War. As Chester R. Burns has shown, the scientific imprecision of medicine before the 1870s made malpractice suits almost impossible to adjudicate for the objective evaluation of the performance of the physician. (Burns, "Malpractice Suits in American Medicine Before the Civil War," Bulletin of the History of Medicine, vol. XLIII (1969), pp. 41-56.) By the 1880s, however, medical knowledge had advanced sufficiently in some areas to permit objective evaluation, and regular physicians were quick to sense implications that such suits held for their own interests. By 1888 the President of the Texas State Medical Association was complaining not about dead letter malpractice provisions, but about the "increasing number of suits" brought against some of the most prominent
members of the profession. The profession should not, of course, lend its "influence unworthily, to shield a practitioner who, by ignorance or imposition, had gotten into trouble." But there was a great need, he said, for "some local protection to society against the malevolence and rapacity of irresponsible harpies."

The following is a summary of cases noted in the Texas Medical History Collection (Barker Texas History Center, University of Texas, Austin, Texas), in which a medical practitioner has been sued in his professional capacity. The cases are those that have come before the Texas appellate courts. There are, of course, no printed reports for cases other than those which have been appealed from district or county courts. Of the hundreds of cases that have never been appealed, it would be necessary to search records of individual trial courts.

The greatest number of cases are prosecutions for practicing medicine illegally, the defendant either never having secured a license, or having failed to properly register the license. Under such prosecutions, Texas law recognizes no distinction between the orthodox physician and the large field of quacks and irregulars. Many of the reports of the cases do not mention the particular school of the medical profession to which the practitioner belongs.

To facilitate review, these cases have been divided into the following groups.

I. Prosecution under statutes for illegal practice of medicine.

(a) Regular physicians and doctors.
(b) Masseurs.
(c) Psychic healers.
(d) Electrical therapeutics.
(e) Nature healers.
(f) Chiropractors.
(g) Cases in which the defendants' methods of treatment are not mentioned.
(h) Optometrists.

II. Miscellaneous Cases.

(a) Failures to pay special tax.
(b) Revocation of license.
(c) Abortion.

III. Negligence-Malpractice suits (citations given without statement of fact or judgment)

In cases of group I (a), involving orthodox physicians, various forms of reversals more than double the number of affirmed convictions. In the other groups of this class, affirmation of conviction is the predominant result.
Penalties in this class range from $50 to $250, with imprisonment from 20 minutes to 30 days. Light penalties and fines may explain why several of the doctors were repeatedly convicted of the same offense. Yet it is not clear whether a heavier penalty would have stopped the continued illegal practice of medicine by the same person, or whether it would have resulted in still fewer trial court convictions.

1. (a)

Conviction Reversed and Remanded.

Price v. State, 50 S.W. 700 (1899),
Conviction Reversed.

W. N. Norwood v. State, 158 S.W. 270 (1913),
Conviction Reversed and Remanded.

Ex. Parte Collins, 121 S.W. 501 (1909),
Conviction Affirmed. [Case affirmed by U.S. Supreme Court. 223 U.S. 288.]

State v. James A. Goldman, 44 Tex. 104 (1875),
Indictment quashed, Affirmed.

Tom Marshall v. State, 119 S.W. 310 (1909),
Conviction Reversed and Prosecution ordered dismissed.

A Carriberie v. The State, 3 Tex. Crim. App. 262 (1877),
Conviction Affirmed.

R. Person v. State, 109 S.W. 935 (1908),
Conviction Reversed and cause dismissed.

L. W. Gay v. State, 184 S.W. 200 (1916),
Conviction Affirmed.

J. Less v. State, 246 S.W. 382 (1922),
Conviction Reversed and Remanded.

George M. Howe v. State, 78 S.W. 1064 (1904),
Conviction Reversed.

Ira W. Collins v. State, 152 S.W. 1047 (1913),
Conviction Affirmed.

Ira Collins v. State, 171 S.W. 729 (1914),
Conviction Reversed and Remanded.
W. K. Fouts v. State, 101 S.W. 223 (1907),
Conviction Affirmed.

W. W. Stone v. State, 86 S.W. 1029 (1905),
Conviction Affirmed.

G. W. White v. State, 157 S.W. 152 (1913),
Conviction Affirmed.

(b)
W. J. C. Germany v. State, 137 S.W. 130 (1911),
Conviction Affirmed.

J. M. Newman v. State, 124 S.W. 956 (1910),
Conviction Affirmed.

R. G. Milling v. State, 150 S.W. 434 (1912),
Conviction Affirmed.

J. M. Newman v. State, 134 S.W. 688 (1911),
Conviction Affirmed.

W. J. Dankworth v. State, 136 S.W. 788 (1911),
Conviction Affirmed.

C. E. Hyroop v. State, 179 S.W. 878 (1915),
Conviction Affirmed.

W. B. Denton v. State, 201 S.W. 183 (1918),
Conviction Reversed and Remanded.

J. M. Newman v. State, 163 S.W. 427 (1914),
Conviction Affirmed.

(c)
Bishen Singh v. State, 146 S.W. 891 (1912),
Conviction Affirmed.

(d)
S. F. Larson v. State, 285 S.W. 317 (1926),
Conviction Affirmed.

(e)
J. H. Lewis v. State, 155 S.W. 523 (1913),
Conviction Affirmed.
Mrs. M. E. Stiles v. State, 148 S.W. 152 (1912),
Conviction Affirmed.

(f)
D. M. Hicks v. State, 227 S.W. 302 (1921),
Conviction Affirmed.

David B. Teem v. State, 183 S.W. 1144 (1916),
Conviction Affirmed.

W. L. Johnson v. State, 267 S.W. 1057 (1924),
Conviction Affirmed.

C. W. Maiser v. State, 235 S.W. 576 (1921),
Conviction Affirmed.

H. Gordon Hargett v. State, 293 S.W. 171 (1927),
Conviction Affirmed.

(g)
Conviction Affirmed.

E. D. Hilliard v. State, 7 Tex. Crim. App. 69 (1879),
Conviction Affirmed.

A. R. Ronald v. State, 47 S.W. 976 (1898),
Conviction Affirmed.

J. W. Young v. State, 181 S.W. 472 (1916),
Conviction Affirmed

John Mueller v. State, 153 S.W. 1142 (1913),
Conviction Affirmed.

Byron L. Black v. State, 216 S.W. 181 (1919),
Conviction Affirmed.

B. F. Byrd v. State, 162 S.W. 360 (1913),
Conviction Affirmed.

Conviction Affirmed.

J. S. Rutherford v. State, 187 S.W. 481 (1916),
Conviction Reversed and Remanded.
L. H. Herrington v. State, 166 S.W. 720 (1914),
Conviction Affirmed.

Carl Aldenhoven v. State, 56 S.W. 914 (1900),
Conviction Reversed.

Dr. Jim Woodson v. State, 238 S.W. 1114 (1922),
Conviction Reversed.

J. J. Lockhart v. State, 124 S.W. 923 (1910),
Conviction Reversed.

Henry Young v. State, 128 S.W. 1103 (1910),
Conviction Reversed and Remanded.

Conviction Reversed and Dismissed.

Anna Reum v. State, 206 S.W. 523 (1918),
Conviction Reversed and Remanded.

O. H. Tilley v. State, 2 S.W. 2d. 859 (1928),
Conviction Reversed and Remanded.

J. E. Ellison v. State, 6 Tex. Crim. App. 248 (1879),
Conviction Reversed.

(h)
F. R. Baker v. State, 240 S.W. 924 (1922),
Conviction set aside and prosecution ordered dismissed.

John F. Tipton v. State, 168 S.W. 97 (1914),
Conviction Affirmed.

II. (a)
J. S. Rutherford v. State, 169 S.W. 1157 (1914),
Conviction Reversed and prosecution ordered dismissed.

T. H. Hairston v. State, 37 S.W. 858 (1896),
Conviction Reversed.

J. L. G. Adams v. State, 78 S.W. 935 (1904),
Conviction Reversed.

H. S. Broiles v. State, 68 S.W. 685 (1902),
Conviction Reversed.
(b) 
Berry v. State, 135 S.W. 631 (1911),
Conviction Affirmed.

Morse v. St. Board of Med. Examiners, 122 S.W. 446 (1909),
Judgment Affirmed.

(c) 
Hammet v. State, 209 S.W. 661 (1919),
Conviction Affirmed.

III.

Graham v. Gautier, 21 Tex. 112 (1858).

Payne v. Francis, 37 Tex. 75 (1872).

Brooke v. Clark, 57 Tex. 105 (1882).

Rishworth v. Moss, 159 S.W. 122 (1913).

Moss v. Rishworth, 222 S.W. 255 (1920).

Miles v. Harris, 194 S.W. 839 (1917).

Hackler v. Ingram, 196 S.W. 279 (1917).

Hamilton v. Harris, 204 S.W. 450 (1918).


Hamilton v. Harris, 223 S.W. 533 (1920).

Moore v. Ivey, 262 S.W. 283 (1920).


Urrutia v. Patino, 297 S.W. 512 (1927).


25 Transactions of the Texas State Medical Association, vol. XXVII (1900),

269–270.

28. The full caption read "A Journal Devoted to the Interests of the Medical Profession and Public Health of Texas. Arguments in this chapter relating to specific public health statements and policies during the Progressive Era are taken from my paper, "Constitutional and Legal Dimensions of Urban Public Health Crises and the Professionalization of Medicine in Texas During the Progressive Era," presented at the annual meeting of the Texas State Historical Association in Waco, Texas on March 2, 1974."
CHAPTER VII - FOOTNOTES


2 These clauses are found in preambulatory statements in the 1845, 1861, 1866, and 1869 state constitutions. See John Sayles, Constitutions of the State of Texas (St. Louis, 1888).

3 The text of the complete article and section is found in Sayles, Constitutions, pp. 288–291.

4 That the powers to preserve the public health and safety should be made in express terms of a matter of municipal duty was common practice in the nineteenth century. Courts had held rather consistently that state legislatures were competent to delegate to municipalities of power to regulate, restrain, and even suppress particular kinds of business, if deemed necessary for the public good. See John F. Dillon, Commentaries on the Law of Municipal Corporations, Fifth Edition (Boston, 1911), vol. 1 pp. 560–561 for a discussion of this practice and the cases upholding its validity. In Texas the delegation of police powers to local governmental units came most frequently through the characters of incorporated towns. When county commissioners received grants of the state’s police powers it was usually through a special law or in the act creating and organizing the county.

5 H. P. N. Gammel, The Laws of Texas, 1822–1897 (Austin, 1898), vol. VI, pp. 176–177. The law, passed June 10, 1870 also had provisions for quarantined persons to be able to go ashore with the written permission of the local health officer.

6 Ibid., p. 177.

7 Ibid., p. 211.

8 The legislature, informed of the Court’s decision by the governor, passed no new health laws. The situation reverted back to what it had been before 1870 when local authorities were left to their own devices in setting up quarantines or otherwise protecting the health of their citizens. An earlier law of 1856 had in fact sanctioned this practice by making all responsibility for quarantines come under city and county governments. Gammel, Laws of Texas, vol. IV, p. 204.

9 Peete had teamed to author an important and influential book about the
yellow fever epidemic in Portsmouth, Virginia. See Report of the Portsmouth Relief Association to the Contributors of the Fund for the Relief of Portsmouth, Virginia During the Prevalence of the Yellow Fever in that Town in 1855 (Richmond, 1856). Also, he had served with the United States Naval Medical Service in Brazil studying tropical diseases. Newspapers in Houston and Galveston held Peete in high regard and considered him an unselfish and devoted public servant. In addition to newspaper reports of his services, records of the Galveston city council are revealing of the extent of his activities and the value of his contribution to the community. Extended statements appear in the Minutes of the Proceedings of the City Council of Galveston (City Secretary's Office, City Hall, Galveston, Texas), Book II (1868-1871), pp. 4, 67, 204, and 207; Book III (1871-1874), pp. 381, 661, and 702; and Book IV (1874-1877), pp. 122. Note also from the same source a resolution by the Mayor and City Alderman passed at Peete's death, Book IV, pp. 327-328.

10 Houston Daily Telegraph, April 4, 1868.


12 Galveston Daily News, June 1, 1871.

13 Ibid., June 3, 1871.

14 Ibid., June 16, 1872.


16 For full text of this bill, see Houston Daily Telegraph, June 1, 1876. Note also: Pat Ireland Nixon, A History of the Texas Medical Association, 1853-1953, pp. 138-181.


19 Consider the statement of the year before by Dr. R. H. Harrison, president of the Texas Medical Association: "...the time has been when our law-makers were expected to be possessed of some of the elements of statesmanship; to be able to discriminate as to measures necessary or like y to confer benefits on their constituency; but that time is passed, and the average legislator now waits as long as possible to see which way the cat will jump before he ven-
tures to make up his mind upon the merits of any question whatever."
Quoted in Transactions of the Texas Medical Association, 1877-1878 (Marshall, Texas, 1880), pp. 41-42.

20 Indeed, the epidemic seemed to prove that even state-wide organizations lacked the power and range to stop the spread of yellow fever along busy commercial avenues. Shock waves from the epidemic reached to Washington and resulted in the 1879 creation of a national board of health. See Smillie, "The National Board of Health, 1879-1883," American Journal of Public Health, vol. XXXIII (1943), pp. 925-930.


22 Ibid., p. 1387.

23 Ibid.,

24 Ibid., 1386.


26 Ibid., vol. IX, pp. 201-203.

27 Ibid., vol. XI, pp. 116-117.
BIBLIOGRAPHY

1. PRIMARY SOURCES

   A. Manuscripts

Barker Texas History Center, University of Texas Archives
Anonymous Englishman's Diary
James H. Baker Diary
William Pitt Ballinger, Diary and Correspondence
Amelia Barr Letters
Don Carlos Barrett Papers
Thomas Barrett Narrative
Edwin P. Becton Papers
Miles S. Bennet Papers
John H. Bowers Family Papers
Asa Brigham Papers
John Sowers Brooks Letters
Canebrake Plantation Records
William Clinton Chambers Papers
Greenville S. Dowell Reminiscences
Herman Ehrenberg Reminiscences
Joseph Evans Papers
John Salmon Ford Papers
B. F. Gholson Reminiscences
Ottoline Fuchs Goeth Reminiscences
Ernest K. Gruene Narrative
Robert Hagan Diary
Sylvanus Hatch Narrative
William P. Head Papers
John R. Heartsill, Diaries and Memoranda
John Hunter Herndon Papers
Robert Anderson Irion Papers
Patrick Churchill Jack Letter
Moses Johnson Papers
Thomas H. Nott Papers
Swante Palm Papers
Charles Carroll Parsons Letter
Mary Ann Peebles Diary
Rufus G. Pettit Family Papers
Rosalie Bridget Hart Priour Reminiscences
Harriet Virginia Scott Letters
Francis C. Sheridan Reminiscences
Ashbel Smith Collection
James H. Starr Papers
Texas Medical History Collection

Houston Public Library
Mayors' Book, Texas History Room

Jesse H. Jones Medical Library
Mading Collection

Rosenberg Library [Galveston]
William Pitt Ballinger Diary
Joseph Osterman Dyer Collection
Samuel May Williams Papers

Texas State Archives
I. D. Affleck Collection
Aldridge Family Papers
John Q. Anderson Collection
J. M. Bailey Literary Effort
Jesse Benjamin Letter
Broadsides Collection
Governors' Papers
Public Printing Papers

B. Unpublished Public Documents

Minutes of the City Council of Houston, City Secretary's Office,
Houston, Texas, Books A-E.

Minutes of the Proceedings of the Criminal [State] District Court,
Harris County, 1872-1880, Harris County Criminal Court
Records Division, Houston, Texas

Mortality Records, 1874-1900, Public Health Department, City
of Houston

Ordinance Book, 1857-65, City Secretary's Office, Galveston,
Texas

Proceedings of the Mayor and Board of Aldermen of the City of
Galveston, 1849-80, City Secretary's Office, Galveston,
Texas

Republic of Texas Customs House Reports, 1836-45, Texas State
Archives

C. Published Public Documents

Tabor, George R. The 1903 Epidemic of Yellow Fever in Texas,
and the Lesson to be Learned From It. Austin: Bulletin of the
University of Texas, No. 64, 1905.

Brumby, W. M. Biennial Report of the Texas State Board of Health,
from September 1, 1908 to August 31, 1910 to the Governor.
Austin: Austin Printing Company, 1911.


D. Legal Sources

Dallam, James Wilmer, A Digest of the Laws of Texas [containing a full and complete compilation of the land laws together with the opinions of the Supreme Court from 1840 to 1844 inclusive]. Austin: Gammel–Statesman Publishing Company, 1904.


Hartley, Oliver C., A Digest of the Laws of Texas [to which is subjoined an appendix containing the acts of the Congress of the United States on the subjects of the naturalization of aliens, and the authentication of records, etc., in each state or territory, so as to take effect in every state or territory; and to which are prefixed the constitutions of the United States, of the provisional government of Texas, of the Republic of Texas, and of the State of Texas]. Philadelphia: Thomas, Cowperthwait & Company, 1850.

Paschal, George W., A Digest of Decisions [comprising decisions of the Supreme Court of Texas and of the United States upon Texas law, of force and repealed, with references to all the civil, Spanish, and common law decisions and authorities cited by the judges.] 3 vols., Washington, D. C.: W. H. & O. H. Morrison, 1872-75.


E. Books and Articles


Parrish, Edward Evans, Crossing the Plains in 1844. N.p., 1844.


Richardson, Albert D., Beyond the Mississippi: From the Great River to the Great Ocean. Hartford, Conn.: American Publishing Company, 1867.


Sawyer, M. E., A Treatise on Primitive or Secondary Disguised or Misplaced Fever, as a Single Disease; with the Varieties, Cause, and Treatment, As It Appears in Most of the Particular Forms of Fever Recognized by Nosologists. New York: Peabody and Company, 1831.


Tytler, James, A Treatise on the Plague and Yellow Fever. Salem,
Massachusetts: B. B. Macanulty, 1799.

F. Periodicals

*Albany Law Journal*
*American Bar Association Journal*
*American Civil Law Journal*
*American Journal of Social Science*
*American Law Register*
*American Law Review*
*American Medical Weekly*
*American Political Science Review*
*American State Reports*
*Atlantic Monthly*
*Case and Comment*
*Central Law Journal*
*Chicago Legal News*
*Columbia Law Review*
*Harper's New Monthly Magazine*
*Harper's Weekly*
*Harvard Law Review*
*Justice of the Peace Law Magazine and Review*
*Lawyer's Reports Annotated*
*Marquette Law Review*
*Medical Record*
*Medico-Legal Journal*
*Michigan Law Review*
*Missouri Bar Association Reports*
*National Review*
*Nebraska Law Review*
*North American Review*
*Old and New*
*Southern Law Review*
*Texas Law Review*
*Texas State Journal of Medicine*
*The Forum*
*The Nation*
*Washington Law Reporter*

G. Newspapers

*Austin City Gazette*
*Austin State Gazette*
Bastrop Advertiser
Bellville Countryman
Belton Independent
Brazoria Brazos Courier
Brenham Enquirer
Clarksville Northern Standard
Clarksville Standard
Dallas Herald
[Galveston] Flake's Bulletin
Flake's Daily Galveston Bulletin
Galveston Civilian
Galveston News
Galveston Daily News
Galveston Tri-Weekly News
Galveston Weekly News
Georgetown South Western American
Houston Evening Star
Houston Morning Star
Houston Telegraph
Houston Telegraph and Texas Register
Indianola Bulletin
La Grange Intelligencer
Lavaca Journal
[Marshall] Harrison Flag
[Matagorda] Colorado Tribune
Nacogdoches Times
San Antonio Herald
Waco Brazos Guard

II. Secondary Sources

A. Unpublished Dissertations and Theses


B. Books


Biggs, Walter D., The Brush of the Angel's Wings: the Story of the
Blake, John B., Public Health in the Town of Boston, 1630-1822.
Brooks, Stewart M., Civil War Medicine. Springfield, Illinois:
Boyce, Sir Rupert W., Yellow Fever and Its Prevention--A Manual
for Medical Students and Practitioners. New York: E. P. Dutton
and Company, 1911.

Mosquito or Man? -- The Conquest of the Tropical World.

Bullough, Bonnie, and Bullough, Vern L., Poverty, Ethnic Identity,
Capers, Gerald M., Occupied City: New Orleans Under the Federals,
Carter, Henry R., Yellow Fever--An Epidemiological and Historical
Study of Its Place of Origin. Baltimore: Williams & Wilkins,
1932.
Chassaignac, Charles, trans., Yellow Fever by Just Touatré. New
Orleans: New Orleans Medical and Surgical Journal, Ltd.,
1898.
Clark, Thomas D., ed., Travels in the Old South. Three volumes.
Coleman, James M., Aesclapius on the Colorado: The Story of
Medical Practice in Travis County to 1899. Austin: Encino Press,

Coleman, W. L., A History of Yellow Fever--Indisputable Facts
Pertaining to Its Origin and Cause. Chicago: Clinic Publishing
Company, 1898.
Cox, George W., History of Public Health in Texas. Austin: Texas
State Department of Health, 1950.
Dolan, Edward F., Jr., and Silver, H. T., William Crawford Gorgas:
Domínguez, Francisco, Carlos F. Finlay--Appreciation of Dr. Finlay
on His Work in Connection with Yellow Fever--History of His
Discovery of Method of Transmission. Paris: Librarie Louis Arnette,
1935.
Duffy, John, Epidemics in Colonial America--Baton Rouge: Louisiana
State University Press, 1953.

D., ed., The Rudolph Matas History of Medicine in Louisiana.

History of Public Health in New York City, 1625-1866.

Sword of Pestilence--The New Orleans Yellow Fever Epi-
demic of 1853. Baton Rouge: Louisiana State University Press,
1966.
Fairman, Charles, Reconstruction and Reunion, 1864-88 [VI, I, The
Oliver Wendell Holmes Devise History of the Supreme Court of


Harris County Medical Society, Houston, Texas, Historical Committee, A History of Organized Medicine in Harris County. Houston: Harris County Medical Society, 1948.


Jordan, Terry G., German Seed in Texas Soil. Austin: University


---, Century of Medicine in San Antonio, the Story of Medicine in Bexar County, Texas. San Antonio: published by the author, 1936.


Reeves, L. H., The Medical History of Fort Worth and Tarrant County: One Hundred Years, 1853-1953. (Fort Worth?): N.p., 1953.


Writers' Program of the Work Projects Administration in the State of Texas, Corpus Christi--A History and Guide. Corpus Christi: Corpus Christi Caller-Times, 1942.


C. Articles


, "Passage of the Virus of Yellow Fever Through the Skin," The American Journal of Tropical Medicine, vol. VIII (1928), pp. 371-78.


Brindley, G. V., "One Hundred Years of Surgery in Texas," Texas
Cassedy, James H., "Edwin Miller Snow: An Important American


Engel, George L. "A Unified Concept of Health and Disease," Per-


Hurst, James Willard, "Legal Elements in United State History," in


Kemp, Hardy A., "One Hundred Years of Health Guardianship and Health Progress in Texas," Texas State Journal of Medicine, vol. 49 (1953), pp. 308-311.


Knoff, William F., "Historical Backgrounds for Disease Concepts in Medicine and Psychiatry," New York State Journal of Medicine,
Mitchell, Martha C., "Health and the Medical Profession in the


Rosen, George, "Public Health Problems in New York City During the Nineteenth Century," New York State Journal of Medicine, vol. L (1950), pp. 73-78.


Rosenberg, Charles E., "The American Medical Profession at Mid-Nineteenth Cen-
Roemer, Milton L., and Faulkner, Barbara, "The Development of
Public Health Services in a Rural County: 1838-1949," Journal
of the History of Medicine and Allied Sciences, vol. VI (1951),
pp. 22-43.
Rouse, M. O., "Medical Education in Texas," Texas State Journal
of Medicine, vol. XLIX (1953), pp. 320-322.
Russell, Frederick F., "Permanence Value of Major Walter Reed's
Work on Yellow Fever," American Journal of Public Health,
Mount Sinai Hospital, New York, vol. XIX (1953), pp. 764-
789.
---, "The Past and Future of the Public Health Service,"
293-302.
Scheiber, Harry N., "The Road to Munn: Eminent Domain and the
Concept of Public Purpose in the State Courts," in Donald
Fleming and Bernard Bailyn, eds., Perspectives in American
Schmidt, Joseph, editor, "Impressions of Texas in 1860", Southwestern
Sides, Stanley D., and Meloy, Harold, "The Pursuit of Health in the
Mammoth Cave," Bulletin of the History of Medicine, vol. XLIX
Sigerist, Henry E., "The Cost of Illness to the City of New Orleans
in 1850," Bulletin of the History of Medicine, vol. XV (1944),
pp. 498-507.
Simpson, H. N., "The Impact of Disease on American History,"
Shira, Donald D., "The Legal Requirements for Medical Practice--
An Attempt to Regulate by Law and the Purpose Behind the Move-
ment," Ohio State Archaeological and Historical Quarterly,
vol. XLVII (1939), pp. 181-188.
Shryock, Richard Harrison, "The American Physician in 1846 and
CXXXIV (1947), pp. 1323-1324.
Scott, H. H., "The Influence of the Slave Trade in the Spread of
Tropical Diseases," Transactions of the Royal Society of Tropical
pp. 64-71.
Shryock, Richard Harrison, "Sylvester Graham and the Popular Health
Movement, 1830-1870," Mississippi Valley Historical Review,
vol. XVIII (1931), pp. 172-183.
---, "Quackery and Sectarianism in American Medicine,"


