THE PHILADELPHIA PESTILENCE OF 1793

by

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STATEMENT BY AUTHOR

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATEMENT BY AUTHOR</td>
<td>i</td>
</tr>
<tr>
<td>HISTORICAL INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>The Problem of Communicable Disease</td>
<td></td>
</tr>
<tr>
<td>The Advent of Yellow Fever</td>
<td></td>
</tr>
<tr>
<td>I. THE DISEASE: A Discussion of Cause, Diagnosis, and Prevention</td>
<td>7</td>
</tr>
<tr>
<td>Yellow Fever: Cause, Transmission, and Pathology</td>
<td></td>
</tr>
<tr>
<td>Eradication of the Disease and Insect Carrier</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever: 1793 Theories of Disease, Contagion, and Epidemics</td>
<td></td>
</tr>
<tr>
<td>II. THE PLACE: Philadelphia in Turmoil</td>
<td>31</td>
</tr>
<tr>
<td>Philadelphia in 1793, Foremost City in the United States</td>
<td></td>
</tr>
<tr>
<td>The National Government in Philadelphia</td>
<td></td>
</tr>
<tr>
<td>III. THE SIEGE</td>
<td>51</td>
</tr>
<tr>
<td>Onset of the Epidemic: First Cases and Establishment of Diagnosis</td>
<td></td>
</tr>
<tr>
<td>The Medical Profession Faces the Fever</td>
<td></td>
</tr>
<tr>
<td>IV. THE RECOVERY</td>
<td>85</td>
</tr>
<tr>
<td>The State Government of Pennsylvania Responds</td>
<td></td>
</tr>
<tr>
<td>The City Government Copes with the Pestilence</td>
<td></td>
</tr>
<tr>
<td>The National Government Reacts to the Epidemic</td>
<td></td>
</tr>
</tbody>
</table>

ii
HISTORICAL INTRODUCTION

Communicable disease in man has been the subject of speculation and searching study since the days of Hippocrates. Plagues and pestilences, widely-used terms to cover visitations of disease in early times, were considered as a punishment of man by the gods. The Greeks initiated scientific thinking on this subject with their doctrine of the "epidemic constitution," which held that a disease became widespread when the atmosphere was suitable for its propagation. This theory was advanced to explain the epidemic form of a disease as distinguished from its ordinary endemic prevalence. When leprosy became epidemic in the sixth century, certain rules were formulated to isolate the leper and thereby control the disease. That leprosy was transmissible from man to man had been known for several hundred years, but what facilitated its spread at certain times more than others was a mystery. In the mid-fourteenth century the focus of epidemiological speculation centered on the "plague" as that disease became pandemic and swept the entire continent of Europe. After this experience a doctrine of contagion evolved: the contagious element was thought to be some chemical property in the air, possibly a gaseous element.

A number of the early pestilences were identified as distinct and different diseases by their peculiar symptoms, course, duration,
and termination. The "fevers" generally encompassed a large group of indistinguishable diseases; but smallpox, plague, cholera, and malaria can be differentiated by their descriptions in early writings. But what forces combined to render any one of these diseases epidemic in form at certain times? Why did some diseases become more prevalent while others declined? What caused epidemics to cease without affecting all of mankind once they had started? These questions were the center of epidemiological speculation for hundreds of years. The mysterious phenomena of epidemic disease for twenty centuries revolved around the various theories of contagion, local miasms, and the "epidemic constitution" until the germ theory of disease was finally propounded.

Epidemic disease was no novelty in the early history of America. The majority of diseases common in Europe found their way to America with the early settlers, and visited death and destruction with relentless regularity. The more severe types of epidemic disease, however, did not become endemic in America as smallpox and plague were in Europe. Malaria, typhoid, dysentery, and the various other "agues" and "fluxes" were always prevalent in some degree in the New World. If their mortality exactions were not as high, they were debilitating nonetheless. In British America throat distempers, measles, and other diseases now associated with childhood decimated the young by their frequent visits throughout the settlements. The exactions from all epidemics were costly from both a social and economic standpoint during the first two
A new name was added to the epidemic disease nomenclature in the American environment. Yellow fever, as this disease became known, by the late eighteenth century had earned dubious distinction as the "American plague." Origin of the disease was obscure and debatable. There were some medical men who held to the theory that the disease was endemic in America from the beginning, but others concluded that it came to America by way of the West Indies where it was introduced by slaves from Africa. The earliest outbreaks of yellow fever were noted in the Greater Antilles in the late fifteenth century, and thereafter it was observed to be endemic throughout the West Indies. The first incidence of yellow fever on the North American continent occurred in the late seventeenth century in the cities of New York, Philadelphia, Baltimore, Norfolk, and Charleston.

During the eighteenth century the city of Philadelphia recorded no less than six major epidemics of yellow fever and several visitations of lesser degree. The first clearly-identified outbreak of the disease in North America was recorded here in 1699, along with a similar epidemic in the same year in Charleston. Philadelphia witnessed epidemics again in 1741, 1747, and 1762. Then, in 1793, it suffered "one of the

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most devastating outbreaks of pestilence ever recorded on this side of the Atlantic. This city of some forty to fifty thousand inhabitants was decimated by one-tenth by yellow fever. The lack of adequate population records and vital statistics notwithstanding, a mortality rate which often exceeded one hundred per day attested to the impact of this pestilence.

Not only was Philadelphia then the most populous and prosperous city in the United States, it was the temporary capital as well. Political leaders of the young nation and representatives of foreign governments congregated here. Important personages, as well as ordinary citizens, became victims of the pestilence in 1793. All who could, including most of the public officials, fled the city; the processes of government, along with the usual activity of a bustling metropolis, were disrupted and practically ceased. Those who remained were subjected to a nightmare of disease and death which prevailed for the three most tragic months in all of Philadelphia's history.

The tragedy was not accepted without remonstrance. What caused the pestilence? the people asked; why did it happen and how could such a calamitous thing be prevented in the future? The governor of Pennsylvania wanted to know the answers and so did the President of the United States. A diplomatic crisis was imminent in the affairs of the nation and Congress should be called to consider important matters but how could this be done with Philadelphia in such a distressful

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state? The governor summoned the medical men; the most reputable physicians in all of America were to be found here, because Philadelphia had the first school of medicine and hospital in America. The doctors made their suggestions on how best to deal with the pestilence, but they could not furnish the answers as to why it had occurred. The answers would not come for another century.

Yellow fever was studied for a full century after the 1793 epidemic in Philadelphia before mankind was delivered of this pestilence. Even though it is still prevalent in many areas of the world, yellow fever does not hold the terror as an unknown assailant today that it did in 1793. Latest statistical reports of the World Health Organization record a total of nine cases, six in the Americas and three in Africa, for the first nine months of the year 1959. None were recorded for the North American continent or the West Indies. Epidemiologists, however, do not consider the threat eliminated. While much has been discovered about yellow fever, there is much more to be investigated.

This study of the enemy which attacked the city of Philadelphia in 1793 will be conducted from the vantage point of a half-century of research into all aspects of that enemy's strategy. The fight against yellow fever has been costly in terms of men and resources, and the combat has been closely aligned with the political and economic history of the United States. Dr. Benjamin Rush, who viewed the attack at first hand in 1793, concluded:

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Narratives of escapes from great dangers of shipwrecks, war, captivity, and famine, have always formed an interesting part of the history of the body and mind of men. But there are deliverances from equal dangers which have hitherto passed unnoticed, I mean from pestilential fevers.  

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CHAPTER I

THE DISEASE

A Discussion of the Cause, Diagnosis, and Prevention

For the most part, the enigma of yellow fever was explained
when the mosquito carrier was demonstrated by epidemiologists in
1900\(^1\) — over a hundred years after the great pestilence in Philadelphia.
The etiologic agent, a filterable virus, was established by 1927. Un-
like microorganisms identified as causes of specific diseases, the in-
f ective agent of yellow fever could not be seen under the microscope.
The visible carrier, however, was observed until much was discovered
about her habits. It was the female of the species that spread yellow
fever with her sting.

Wherever the mosquito \textit{Aedes aegypti}\(^3\) could live and reproduce,

\(^1\)Walter Reed, James Carroll, and Aristides Agramonte, "The
Etiology of Yellow Fever," \textit{Journal of the American Medical Association},
XXXVI (February, 1901), 431-440.

\(^2\)J. Austin Kerr, "Yellow Fever — The Saraswati of Virology,"
\textit{Yellow Fever: A Symposium in Commemoration of Carlos Juan Finlay}
33.

\(^3\)The \textit{Aedes aegypti} has undergone numerous name changes since it
first became the subject of intensive study. Originally the name \textit{culex}
fasciatus was given the species. This was changed to \textit{Stegomyia fasciata}
when the species was discovered to be disease bearing. The present name,
\textit{Aedes aegypti}, appears in epidemiological literature after 1915. M.J.
p. 294.
there yellow fever could be found, provided that two other factors were present. An active case of yellow fever must be available for the Aedes mosquito to bite, and susceptible individuals nearby to become infected with the virus. The problem appeared simple to solve: eradicate the insect host and there would be no yellow fever.

War against the disease, on the basis of mosquito control and quarantine measures, accomplished noteworthy results. By the year 1915, yellow fever was no longer considered a serious menace in the United States and the disease did not exist in any port within ten days' sail of the Atlantic coast. By 1936, however, two facts changed this picture. "Jungle yellow fever" was known to exist in South America, and airplane service had been established with all South American countries. Epidemiological research was brought back into prominence with the discovery that monkeys could act as reservoirs of the yellow fever virus and that mosquitoes other than the Aedes aegypti could transmit the infection. Rapid transport by air into the once remote areas of the globe brought the continued threat of the disease to the North American continent.

Officials of the World Health Organization describe yellow fever as "one of the diseases which has varying epidemiological characteristics under different circumstances." Dr. Fred Soper, director of the Pan American Sanitary Bureau, a regional office of the World Health Organization, Public Health Administration in the United States 3d ed. (New York: Macmillan, 1947), p. 495.

Organization, was mindful of the extensive research which had gone into the study of the disease when he stated: "Yellow fever has been, in the past, one of the most important of the virus diseases to investigate... it has served as the basic virus on which a great deal of the preliminary work was done, much of which has been applied to other viruses." 6 Yellow fever continues pre-eminent among communicable diseases; one hundred and fifty years of study and research have not furnished complete answers to the complex epidemiology of the pestilence of 1793.

Laboratory techniques have improved, new diagnostic tests ascertain the presence of the disease and later concepts in recording clinical symptoms make for different wording — but yellow fever has not changed and its clinical manifestations are much the same as they were in 1793. Whether the etiology is urban yellow fever or jungle yellow fever, the World Health Organization concludes that there is "only one type of the disease yellow fever, and only one type of yellow fever virus." 7

The variety of names applied to the disease before the shorter designation of "yellow fever" came to be used are indicative of a few classic symptoms of the disease itself. "Bilious remitting fever," "bilious plague," and "malignant infectious fever," were names descriptive of a high fever, epigastric distress, jaundice, and the pattern of

6 Ibid., p. 574.

a fever which abated on the second or third day following onset. "Malignant" and "infectious" indicated its frequent fatality and the belief that it was contagious. "Barbadoes distemper" implied the common occurrence of yellow fever, probably mild in form, in that West Indies Island. Very often the disease passed unnoticed in endemic areas, especially in the young, with only a mild febrile reaction.

The usual symptoms in severe epidemics were the sudden onset with overwhelming prostration and the delirium of high temperature. This spectacular onset and dramatic termination was sufficient to label the disease as pestilential. Vomiting of altered blood, or black vomit, severe jaundice and discoloration of the skin confirmed the diagnosis to most observers. Not all symptoms were always present, however, and the disease itself varied in severity during epidemics, apparently due to individual resistance to infection. 8

Laboratory tests now provide conclusive and certain diagnosis. The three tests, in precise language, are (1) isolation of virus from blood through animal inoculation; (2) demonstration of immune bodies in convalescent serum, when absent in the acute phase; and (3) demonstration of typical pathological lesions in liver tissue. 9 The last test is performed post-mortem and is now used extensively in endemic areas to ascertain the presence of the disease in persons dying from illnesses

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of questionable nature which may be yellow fever. As one attack renders
the patient immune for life, serum tests also detect the prevalence of
the disease which may have occurred years previously.

Two diseases that are frequently reported as yellow fever, or
confused with the disease before laboratory tests confirm diagnosis,
are malaria and dengue fever. Both are mosquito bore, and initial
symptoms often resemble the first symptoms of yellow fever. Headache,
backache, general malaise, chills and fever are symptoms common to all
three diseases. In the absence of laboratory tests, differential
diagnosis is difficult at the onset. The Aedes mosquito carries both
yellow fever and dengue, but other species of mosquito transmit the
latter disease also. The genus Anopheles, for example, is the only
known vector of malaria. Jaundice is a characteristic symptom of
numerous other diseases from benign hepatitis to acute infectious
jaundice. It also occurs in malaria.

The patient with the severe epidemic form of yellow fever is
very sick, the extraordinarily acute reaction bearing witness to the
toxicity of the disease. The virus is abundant in the blood stream
during the first three days. It is only in this period of the disease
that the mosquito, by biting the yellow fever patient, is able to ob­
tax the virus which will produce the disease in a susceptible person.

\footnote{Ibid., p. 153.}

\footnote{Albert DuBois and Louis Van Den Berghe, Diseases of the Warm
Usually the high temperature persists until the second or third day, with the patient either starting to convalesce from this time or developing new symptoms. In the latter case fever returns, albuminuria becomes pronounced, jaundice makes its appearance, and the epigastric region becomes more sensitive with vomiting accentuated. The tendency to hemorrhage is evident and vomiting of altered blood, which resembles coffee grounds, may occur. Jaundice may be totally absent or hemorrhage less evident in some cases. The pulse becomes slow and symptoms similar to shock precede complete prostration. Weakness, always present, becomes worse as the disease progresses.  

The clinical picture alone attests to the virulence of the epidemic form of yellow fever. Pathological findings verify the severity of the attack by organic deterioration in both liver and kidney tissue. In severe epidemic form, DuBois reckons the mortality rate to be fifty percent. Other mortality rates have been estimated at ten to twenty-five percent. How many benign cases might exist without being counted at all, or how many other illnesses during an epidemic might be mistaken by yellow fever, is all a matter of conjecture.

Treatment remains purely symptomatic and supportive. Immune serum is now believed to be of some benefit during the first stage of the illness. Bed rest, measures to relieve gastric distress and the high fever, liquids with glucose and alkalies are all general methods

12 Ibid.
13 Ibid.
of treatment during the acute phase. High carbohydrate and low fat diets are the current trend to alleviate liver damage.  

In the main, prevention is stressed. Vaccines are now available in two forms: Virus strain 17 D, cultured on chick embryo given subcutaneously, is considered to be fifty percent effective; the French strain of virus, cultured in mice and scarified with smallpox virus, is considered to be more effective and easier to apply. Mosquito control, quarantine of ships, and fumigation of airplanes are measures which combined with required vaccination of individuals from endemic areas, have proved effective in eliminating yellow fever from the United States. Continued search for disease incidence in the remote areas of Africa and South America will aid in eradicating epidemic visitations elsewhere by controlling the disease before it becomes a major threat. This program is costly and time-consuming because the areas to be covered are extensive indeed.

In malaria, the causative agent or parasite was discovered first and the insect host later; in yellow fever, the insect host was discovered before the cause of the disease was known. Thus, the Aedes mosquito has been the subject of considerable research and continues to be so. Certain facts have been established in regard to this mosquito: she is house-breeding and is "commonly or almost exclusively

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found in or close to human habitation." She prefers to lay her eggs in containers such as water buckets, barrels, tubs, cisterns, and cans; if such breeding places are destroyed, she may seek other places. But she does not breed in fields, swamps, or wooded areas which are the favorite areas of the malarial mosquito. Other species of forest mosquitoes transmit the yellow fever virus from other vertebrate hosts to man in jungle yellow fever.

Mosquitoes pass through four stages: the egg, larva, pupa, and winged insect require from nine to twenty days, dependent upon the temperature. Warmth favors and cold retards the process, with the Aedes requiring sufficient heat for its full evolution. The female Aedes finds blood indispensible for the development of her eggs and has a preference for human blood. When she bites a yellow fever patient within the first three days of the disease, she obtains blood abundant with the virus of the disease. Twelve days must then elapse before she can transmit the infection to a susceptible person. After this so-called "extrinsic period of incubation," the infected mosquito "remains so during the rest of its life which may be some months." One infected mosquito may transmit the infection to as many persons as she bites.

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18. Carter, op. cit., p. 29: The mosquito's "continuous life as a species at any one place in that region is dependent on whether the species, hibernating as the egg, is able to survive the low temperature of the winter."
thereafter. The male Aedes is a vegetarian and has no part in transmitting the disease.

The Aedes mosquito may be found within a zone extending from approximately 38 degrees north to the same latitude south over the globe. In the Western Hemisphere this band extends roughly between the cities of Washington, D.C., and Buenos Aires, Argentina. The Aedes is also found in many areas where, to date, yellow fever has not been detected. Rosenau, commenting on the presence of the species in the Philippines and other parts of the world "where it is presumably infectable," believes that "these regions have been spared on account of their isolation." Napier, writing some twenty years later, is not so complacent. A yellow fever threat for India, for instance, is possible as "there seems to be no explainable reason why it should not invade them at some, near or distant, future date."

The role of the mosquito as a carrier of yellow fever was first advanced by Dr. Carlos Finlay in Havana in 1881. Dr. Finlay was not an epidemiologist, but he devoted much attention to the study of yellow fever. His numerous papers on the relationship of the mosquito to

20 Ibid., p. 293.


the propagation of yellow fever were not generally accepted at that
time. To prove his thesis, Dr. Finlay had mosquitoes feed on a patient
with yellow fever and then permitted them to bite a number of human
volunteers. It is now known that the experiment failed because Doctor
Finlay did not allow for the necessary incubation period within the
insect host. 23

While Finlay was experimenting with mosquitoes and yellow
fever, investigators in Europe and America were making progress in the
wake of Louis Pasteur's discovery that living microbes produced chemical
changes. Pasteur's theory of fermentation presaged the germ theory of
disease which ushered in the golden age of bacteriology. No longer were
the communicable diseases of cholera, plague, diphtheria, typhoid, and
many other bacteria-caused infections a mystery, now that their causative
agents were demonstrated. 24

Two major enigmas were left unsolved by the germ theory as it
was developed at this time. The first concerned the occurrence of
communicable disease among persons who had had no contact with the
sick; the second was the failure of many persons, in intimate contact
with infectious diseases or those of epidemic nature, to contract the
disease while it was prevalent throughout the community. The human
carrier and the insect host solved the first enigma; to solve the

23 C.A.E. Winslow, Man and Epidemics (Princeton: Princeton
24 Winslow, Man and Epidemics, p. 17.
second, it remained for "an understanding of the low visibility of the disease germ and analysis of the modes of infection." 

That mosquitoes carried the parasitic worm of filariasis had been described by Patrick Manson in England as early as 1879, but this was considered to be an isolated phenomena and was not pursued further at that time. In 1880 a French army surgeon, Alphonse Laveran, described the malarial parasite as found in the human. The role of intermediate carriers of disease was shown in 1893 by experimentation in Texas cattle fever where the tick was the means of transmission. A year later, the insect carrier of tsetse-fly disease was proved. It remained for a British army surgeon, Ronald Ross, to continue the work on malaria, and in 1898 he described the malarial cycle in birds. The Italian zoologist, C.P. Grassi, completed the demonstration of the transmission from the Anopheles mosquito of the malarial parasite to humans in the same year.

Thus the discoveries of the last two decades of the nineteenth century paved the way for the American Yellow Fever Commission, appointed in 1900 "to study the transmission of the disease and to devise methods for controlling it." Composed of Walter Reed, James Carroll, Aristides Agramonte, and Jesse W. Lazear, the Commission went to Cuba.

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26 Winslow, Man and Epidemics, p. 172.
27 Ibid., p. 174.
to conduct its experiments because military occupation of the island was proving costly due to the high mortality rate from yellow fever. Carlos Finlay cooperated with the Commission by furnishing the eggs of the *Aedes aegypti* for the experimentation. Carroll contracted yellow fever and recovered. Lazear died of the disease during the experimentation. The Commission proved conclusively that yellow fever was transmitted by the *Aedes*, and by this means alone. Ruled out for all time was the theory that the disease was contracted by contact with yellow fever patients. Nonimmunes of the disease lived for twenty days in isolated rooms, small and ill-ventilated, in which the clothing and bedding "loathsome with the discharges of yellow fever patients" was piled. All volunteers who underwent this experiment escaped yellow fever as long as they were protected from the bites of mosquitoes.  

Effort was now concentrated on practical control of the insect carrier. Measures instituted by General William Crawford Gorgas resulted in the elimination of the *Aedes* from Havana and later from the Isthmus of Panama. The International Health Board of the Rockefeller Foundation made yellow fever the focus of its epidemiological program. It was the joint purpose of the Foundation to aid in extermination of the insect carrier and to establish experimental laboratories for continued study and research. One such experimental station at Lagos, in Africa, found that the Maccacus rhesus monkey was susceptible to the disease — and this facilitated further laboratory experimentation. It was also at

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the Lagos laboratory that the cause of yellow fever was confirmed to be a filterable virus, ultramicroscopic as well. By 1930 the virus was modified sufficiently so that the anti-yellow fever vaccine could be developed. 30

Tests developed by these research laboratories were perfected to the extent that a widespread detection program could be maintained. The tests showed that yellow fever was far more extensive than was first believed; individuals revealed an immunity in areas of Africa and South America where yellow fever had not been recognized previously. Following two major outbreaks of epidemic yellow fever in Colombia and Venezuela, where no known endemic foci existed, jungle yellow fever was discovered, so-called because it affected vertebrates other than man. At the same time it was discovered that mosquitoes other than the Aedes transmitted this type of yellow fever from wild animals to man. Thus, the cycle of yellow fever was found to be more complicated than the simple "Aedes to man" transmission of the disease. Various species of mosquitoes which almost never enter human habitation could transmit jungle yellow fever to man in the forest or jungle; an epidemic threatened whenever that forest worker went to urban areas where the Aedes abounded. The epidemiologist would now have to be on the alert for epizootics adjacent to settled areas in the zones where Aedes aegypti were to be found to prevent yellow fever epidemics from

The advent of air travel into remote areas of the world posed new problems in the control of yellow fever. More rapid means of transportation also required more stringent rules and regulations in reporting disease incidence and more thorough immunization procedures. Quarantine regulations and immunization requirements are now the province of the World Health Organization. Twentieth century epidemiologists have provided the means of prevention, and health authorities throughout the world have the power to see that such measures are enforced.

Men of the eighteenth century possessed meager weapons indeed against the onslaught of pestilential diseases. In this period of the history of medicine, the sciences of bacteriology, physiology, histology, and pathology were in their infancy if it can be assumed that they were begun at all. Some remarkable discoveries had been made in anatomy: Harvey had described the system of blood circulation in the previous century and there were many writings available on anatomical findings made by cadaver dissection. Kircher and Leeuwenhoek had developed the microscope and had written on such animalculae as their instrument had discovered. Late in the eighteenth century the gross anatomical

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31 Shattuck, pp. 407-408. Mosquitoes found in the jungle which transmit yellow fever are: Aedes simpsoni in Africa and Haemagogus capricornii in South America.

structure and organs of the human body were known; and, as Sir William Osler writes, there had been "a good beginning made in the knowledge of how the machinery worked -- nothing more."^{33}

Vesalius in the sixteenth century had been among the first to describe an aneurysm, thereby recognizing an aberration from the normal.^{34} Giovanni Morgagni, early eighteenth-century professor of medicine at Padua, pointed out the importance of recognizing anatomical changes which took place in disease; and, according to Osler, it was he "who taught us to think anatomically of disease."^{35} Morgagni came at the right time. Medicine then was rampant with diverse theories, schools, and systems all based upon various doctrines from humoralism and animism to vitalism. Into this metaphysical confusion Morgagni interjected some "sensible thinking and ripe scholarship," so that modern clinical medicine can be said to have started with his method of correlating clinical symptoms with the morbid appearance.^{36}

Hermannus Boerhaave organized systematic lectures in the medical school at Leyden which became exceedingly popular with medical students everywhere. He advocated no special system but "studied disease as one of the phenomena of nature,"^{37} as did Thomas Sydenham in England the

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century before. Boerhaave's method of instruction was expanded throughout Europe; and combined with Lancisi, a clinician in Italy, who urged a step to this bent for physiological theorizing and tendency to systems, brought into being a more modern school of medicine. However, as Osler says, it was an unfortunate fact that "the great majority of clinicians could not get away from theoretical conceptions of disease."  

William Cullen continued the same methods of teaching at Edinburgh which had been started at Leyden. Edinburgh became a favorite medical school for American students who went abroad for their education. The theory and practice of medicine current in Europe was brought to America by graduates of the Edinburgh school. In this way Cullen exerted considerable influence on American medicine, and his theory that all disease was due to disorders of the nerve forces was propagated in Philadelphia by one of his most devoted students, Benjamin Rush. Cullen, influenced by Linnaeus's classification of plants, applied this system to disease. All diseases were "divided according to superficial symptoms into classes, genera, and species, 1387 in all." He established a hierarchy of drugs for the treatment of the diseases so outlined; all that was required was to fit the symptoms into his

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38 Ibid., p. 193.
39 Ibid., p. 194.
40 Ibid., p. 195.
classification and apply the remedies prescribed.  

Benjamin Rush was one of many British Americans who went abroad for their medical education. Rush had received his Bachelor of Arts degree from the College of New Jersey at Princeton, completed a five year apprenticeship under the eminent Doctor John Redman in Philadelphia, and then went to Edinburgh in 1766 to study under Cullen. At the end of two years he had completed courses in anatomy, chemistry, medicine, natural philosophy, and the practice of infirmary. His doctoral thesis, written in Latin, was on the subject of gastric digestion. Awarded the Doctor of Medicine degree, he then attended a series of lectures given by John Hunter at St. Thomas's Hospital in London before returning to Philadelphia to practice medicine.

William Shippen and John Morgan had followed a similar pattern in their medical education, and were the first two physicians to offer a series of lectures at the first medical school to be established in America in 1765 at Philadelphia. John Morgan lectured on the theory and practice of medicine; William Shippen lectured on anatomy, surgery, and midwifery. The other two members of the faculty were Adam Kuhn, who lectured on botany and materia medica, and Thomas Bond, who lectured on clinical medicine. Benjamin Rush became the fifth member of the faculty when he began lecturing on chemistry in 1769. These men all held the Doctor of Medicine degree and, as members of the College of

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42 Ibid.
Physicians, they formed a rather exclusive group. The College was composed of gentlemen physicians "dedicated to the improvement of medical science." 44

Education abroad being quite expensive as well as an arduous undertaking, the establishment of the medical school at Philadelphia and the one in New York two years later, in conjunction with King's College -- tended to alleviate the difficulties of training. Many young men, nevertheless, continued the practice of supplementing some part of their medical or surgical training with study in one of the centers of Europe. Usually, only sons of influential and affluent persons could afford such a venture and the physicians tended to come from the wealthier families. 45

Many physicians practicing in Philadelphia, New York, and elsewhere in America in the late eighteenth century did not possess the degree of doctor of medicine. Some were reliable and well qualified men, having obtained their practical medical training under reputable physicians and remaining under this tutelage until they were proficient in the practice of medicine. Others had various degrees of proficiency, and many had no formal or practical medical education at all but prescribed on their own. There were all grades and levels of medical practice in America as in Europe, and quacks and charlatans

abounded in both areas.

Regulations governing medical practice were practically non-existent in British America. A few ordinances, pertaining to quarantine and isolation measures, were sporadic and of doubtful effect. Health councils had not been established in the British colonies, nor were there administrative units concerned with public health and welfare. The Spanish government, on the other hand, had provided a fairly comprehensive system for its American colonies in regard to inspection, licensing, and control of new remedies. Shryock concludes that whatever this may have accomplished in the Spanish colonies, "it at least indicated a concern for public welfare apparently lacking in English speaking lands." 46

It was unfortunate that at this time medical science was marked by such confusion and too much dominated by transcendental mysticism "to have found its true gait." 47 The empiricists held sway, the charlatans were numerous, wandering healers and cancer doctors prescribed for the multitude against the numerous diseases that beset them. The more reputable physicians, although holding to traditional forms of treatment, were not always in agreement concerning them. Bloodletting, a procedure in vogue since ancient times, was highly favored by some doctors and denounced by others. William Cullen was

opposed to the procedure, but certain of his contemporaries and followers practiced bloodletting from moderate to greater degree.\footnote{48}

Cupping and blistering were treatments of long standing; the latter was advocated "for the purpose of arresting the progress of gangrene and mortification,"\footnote{49} and as a local remedy was considered to be most successful. Physicians such as Cullen placed their chief reliance in treating diseases with drugs. Robinson states that in the eighteenth century "faith in pharmacology was as strong as belief in religion."\footnote{50} Time-honored drugs such as mercury and opium were prescribed as a matter of course, and for diseases and conditions not now considered as appropriate.

Some new remedies used during the century are still in good repute.\footnote{51} Bark from the cinchona tree was found to be effective for agues and fevers in South America. This remedy was conveyed to Europe before its use in North America became general; and the terms "Peruvian bark," or simply "bark," were used to designate the drug. Effective in suppressing the chills of malaria, the bark came to be used for all fevers thereafter. The discovery of cinchona was of special interest, according to Osler, as it was "the first great

\footnote{48}{Flexner, p. 64. The practice of venesection continued until well into the nineteenth century.}


\footnote{51}{One drug, a most important addition to therapeutics discovered in the eighteenth century, was digitalis as obtained from the purple foxglove plant. Robinson, p. 356.}
specific to be discovered." Ipecac, another New World remedy, was used originally as an emetic or vomit. Later derivatives of the drug proved to be specifics for dysentery.

Thus the eighteenth century physician was busily engaged in devising new drug substances and adopting new remedies when the older ones fell into disfavor, without scientific research to determine the curative powers of any one of them. The physician, engaged in the vital art of treating the sick, had little time for investigation or comparative studies if he were so inclined. He was a clinician engaged in therapeutics, and, according to Robinson, "therapeutics has been, and of course will remain, the least scientific and satisfactory branch of medicine." Some of the remedies worked, others were questionable, but the patient would not wait. Shryock comments that "treatment must be given, lacking facts, they had to be drawn from partial evidence of pure theory."

Medicine was alive and alert even if there appeared to be a dearth of scientific and purposeful experimentation. Slowly the profession began to weave a hypothesis with the accumulated material at hand, and awaken from its bewilderment over the "plethora of facts"

52 Osler, p. 183.
53 Shryock, p. 162.
54 Robinson, p. 355.
55 Shryock, p. 48.
which confronted it. Other forces in conjunction with social and intellectual movements abroad became manifest in the latter part of the eighteenth century. Humanitarianism made itself felt in America as a general consideration for the lot of the unfortunate. In Philadelphia where this impulse appeared to be at high tide, provisions were made for the care of the indigent and the sick in almshouses and hospitals.

When it came to a concern over the health of the public generally, however, there was the usual administrative indifference — with one important exception: "attempts to control epidemics had long been taken more seriously than the regulation of either sanitation or of medical practice." What was to be done about this matter of epidemic disease visitation? The English government had asked this question of the eminent Doctor Mead when an epidemic of plague threatened London early in the eighteenth century: "What did rational medicine have to say on this important problem of contagion?" Parliament enacted the measures that Mead proposed, but repealed them the next year. Mead's proposal included, besides the usual quarantine and isolation, the suggestion that the neighborhood surrounding the infected areas be kept open and clean.

Quarantine and isolation regulations were at most emergency

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56 Robinson, p. 334.
57 Shryock, p. 83.
58 Ibid.
measures, enacted too late to be of benefit when the epidemic was already present and cast into disuse when the threat had passed. Quarantines were also expensive and hampered commercial interests, especially the port restrictions on ships and goods. And when the fear of epidemic disease subsided, there was the claim that any given disease though epidemic in character was not necessarily spread by contagion. The arguments that epidemics were caused by noxious air and decaying materials called for sanitary reform rather than for quarantines.  

There was little attention paid to the matter of sanitation, especially in America where even the most elementary measures were disregarded. Europe had instituted some measures with street cleaning and sewers; at least the widespread epidemics of smallpox, syphilis, and leprosy had declined. But in America the greatest threat of the century was yellow fever, and it did not fail to visit at least one Atlantic port each year. Laymen accepted the doctrine that yellow fever was contagious; physicians for the most part were miasmatists. Epidemics were no longer caused by some mystical force, the basic condition of the atmosphere was the true cause of great pestilences, and "the most terrible effects were produced only when reinforced by local miasmas and were sometimes supplemented by infection."  

Thus were contagious and miasmatic views harmonized. The  

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59 Ibid., p. 84.  
60 Winslow, Conquest, p. 233.
combination was acceptable to the majority, and with varying emphasis.
This in no way tended to alleviate the impact of the epidemic, but the
citizens could always hope that it would not come this year. President
Washington was neither hopeful nor optimistic when he wrote to Clement
Biddle in September of 1792:

That the City of Phila. should again be visited by that
dreadful malignant fever which has made such impressions upon
it heretofore, is a matter of sore regret and that it should
baffle more and more the skill of the Physicians adds
poignancy to the misfortune.61

The yellow fever did not become epidemic in Philadelphia in 1792. It
was the next year that the epidemic took its fearful toll.

61 John C. Fitzpatrick, (ed.), The Writings of George Washington
CHAPTER II

THE PLACE

Philadelphia in Turmoil

Matthew Carey, editor and publisher of a Philadelphia monthly magazine, concluded the December issue of 1792 with a most gratulant paragraph. Entitled "God hath done great things for us," the editorial declared that there was peace, health, and wealth in the land. Among other reasons for jubilance, said Carey, were "civil freedom securing political happiness" and "religious toleration pointing to universal concord." Carey noted that commerce was increasing and so was manufacturing, and "the bosom that swells not with praise must be insensible indeed to all the feelings which adorn human nature."¹ Earlier in the year, Carey had observed the progress that was evident in every walk of life: more money was available, numerous public works and buildings had been undertaken, and everywhere "private buildings, of equal variety, and comparative value, are springing up."²

Editor Carey's native city, by the last decade of the eighteenth

²Matthew Carey, " Reflexions on the State of the Union, " The American Museum or Universal Magazine, July, 1792, p. 35.
century, had achieved a number of distinctions. First of all, Philadelphia could well claim to be the most historic city in the young nation by reason of the great documents drafted there — the Declaration of Independence and the Constitution of the United States. That it led all other cities in population was attested by the first United States census, completed in 1791. Some 42,520 persons were recorded, and this outdistanced the claims of the two nearest rivals, New York or Boston, in the aggregate count. In describing the city's impressive size, Dr. Benjamin Rush noted that it was "nearly three miles north and south along the Delaware, and above a half a mile due west along the Schuylkill, to which river the limits of the city extend." Philadelphia's center was some four miles due north of the confluence of the two rivers, with the land nearer the juncture "low, moist, and subject to be overflowed."

In addition to being the largest city of the nation, Philadelphia served as a financial and commercial center as well. In 1793 the bustling metropolis was the scene of much trading activity, both domestic and foreign. From an extensive hinterland of fertile farm land, a steady procession of country wagons came down the principal streets to the city wharves with produce for shipment across the Atlantic
or to other American ports. Along the Delaware River waterfront some sixty-six wharves had been erected, wooden casements filled with stone and gravel, but serving adequately the large shipping trade. Far-sighted merchants, extending credit to inland settlements, carried on a profitable and reciprocal trade of merchandise in exchange for the produce of the back country. Private individuals as well as public corporations were engaged in the foreign trade, and "everyone was spending money because everyone knew the boom would go on forever." The National Mint was permanently located in the city, and the Bank of North America and the Bank of the United States had their central office there. Philadelphia could well claim to be the economic capital of the United States.

The city may not have achieved all these distinctions on its own merits. As Schouler points out, Philadelphia "gained permanently the mint as well as the national bank by becoming at this opportune date the temporary capital." Early in the first administration of President Washington, Congress voted to establish a Federal District and, after considerable agitation, Philadelphia was selected in place


of New York as the temporary capital until such time as a permanent site could be developed. The Residence Act of 1790 allowed some ten years for the construction of the new seat of national government. Thus, with Philadelphia serving as the capital of the state of Pennsylvania as well as the nation, it enjoyed a unique distinction in United States history during the last decade of the eighteenth century.

Philadelphia, however, was not as well endowed with public buildings as New York had been. This anonymous comment appeared in Dunlap's Daily Advertiser:

We are told that both houses of Congress are stored in a county court house, a single building, without portico or trees to shade them from the midday sun. In summer it must be as hot as Tophet. Was this contrived to fit the Constitution of Southern members, or merely to save money by driving away the Northern members in the spring, and working short sessions?

It was doubtful, the writer continued, that frugal Philadelphia would expend for a capital building a tenth part of what New York had, which was some twenty-five thousand dollars, "under the mere impression of propriety and respect." That the accommodations provided by Philadelphia were of rather inferior nature, this writer implied as he

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11 U.S. Statutes at Large, XXVIII, Part 2, p. 130.
12 Dunaway, p. 343.
14 Ibid.
Their little court house hooked up in humble imitation of our
city hall is found to be good enough for Congress, and the
President is to continue in a noisy house in Market Street, much
too small for his family; serenaded every morning with the music
of waggoners . . . .

The "little court house" where Congress sat had been erected
just prior to the move of the Federal government from New York to
Philadelphia. This building and the City Hall, which housed the Supreme
Court, were constructed at the same time and adjoined the State House
on the city block later known as Independence Square. The dwelling
selected for the President, deemed one of the best in the city, was
owned by Robert Morris who had been instrumental in obtaining the
temporary capital for Philadelphia. Located at 190 High Street,
which was at Market Street below Sixth, the presidential mansion was
not far from State House Square which, "with its beautiful elms," was

15 Ibid.
17 Harold Donaldson Eberlain, "190 High Street," Transactions of
the American Philosophical Society, Luther P. Eisenhardt, ed., Historic
High Street was altered to suit the needs of the presidential family;
but, with space allocated for drawing rooms and dining rooms, there was
little spare room for living quarters. The three full stories housed —
in addition to the President and Mrs. Washington and their two adopted
grandchildren — the President's secretary, Tobias Lear, and his wife;
three aides, Major Jackson, Robert Lewis, and Bartholomew Dandridge; and
some twenty domestics, white and black. The President commented that
even though the City Corporation had selected the residence "the best
they could get," and "I believe the best single House in the City," yet
it was "inadequate to the commodious accommodations of my family." From
a letter to Tobias Lear, September 5, 1790, in J.C. Fitzpatrick (ed.),
The Writings of George Washington, XXI (Washington: U.S. Government
"the fashionable promenade." Not far distant, as well, was the corner of Third and High where "the old jail and whipping-post exchanged knowing glances." Members of the President's cabinet had various accommodations scattered throughout the city and the suburbs of Philadelphia. Secretary of State Thomas Jefferson, for example, elected to reside at Gray's Ferry, a considerable carriage distance from the center of the city to the southwest.

As America's most populous and prosperous city, Philadelphia was yet a place of simplicity and restraint. The dwellings were substantial and comfortable, many of them brick with surrounding gardens and shrubbery. The wide streets, quite in contrast with other cities of that day, intersected at right angles and "made the city quite safe to find one's way in." It had the reputation of a comfortable city of plain, sober, and substantial people. If the philanthropic and learned societies started in Franklin's day had flourished, so had numerous clubs and taverns. Philadelphia enjoyed a proud pre-eminence in medical, legal, and scientific achievements, but still "an atmosphere of serenity, not to say of dullness, enveloped the public works of the place." Despite its moneyed interests and manifold governmental

\[18\text{Schouler, p. 251.}\]
\[19\text{Ibid.}\]
\[20\text{Ibid.}\]
\[21\text{Ibid.}\]
\[22\text{Ibid., p. 250.}\]
activities, the city retained a rather fluid political and social character. No outstanding cliques dominated the city even if many were in evidence.

The Quaker-like simplicity of the temporary capital was somewhat diminished by a few country estates of the wealthier citizens. There was a general trend to move to suburban areas, not only among the wealthy but also among the middle class. The summer heat, together with the noise and bustle of the city, encouraged this suburban drift. Even stoic Benjamin Franklin thought the heat intolerable and the town "a mere oven," and longed for the countryside. With Philadelphia situated near the water's edge, one of its longest and most populous streets was but a few feet above the river. Wharves jutting into the river blocked the tidal flow, and this left debris to collect around the waterfront, making for an intolerable stench during hot and humid summer days.

If the more affluent acquired large country estates, many more of Philadelphia's citizens lived near the center of town where streets were narrow and the closeness of buildings left no space for gardens. The crowding of buildings also shut off whatever breeze might be had and made for great discomfort in the summer months. As well, there were too few houses to go around in 1793. Many dwellings were occupied by

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23 Bridenbaugh, Cities in Revolt, p. 24.
24 Quoted by Bridenbaugh in Cities in Revolt, p. 15.
more than one family, and lodging houses were usually filled to capacity. Some measures were taken to provide more comfortable living in the city. Awnings were constructed over windows and doorways, and numerous houses had balconies built to catch whatever breezes were prevalent.

A few streets were paved, but the majority were dusty pathways in summer or turned into a mire by heavy rains. There were no curbstones, and but one sewer in the entire city; it served to underdrain Dock Street. Water was supplied by wells, many of them shallow, and the citizens obtained water for drinking at the pumps. Rain-casks stored water for washing and other purposes in individual households. Many complained of the impure water from the shallow wells. As Schouler described it:

with the surface system of drainage, there remained filth in the scourings of filthy housekeepers, whom no police restrained... gutters were green with putrefaction, and streets in motion with the refuse animal and vegetable matter in the hot summer weather...

Scavengers, the so-called garbage collectors, were appointed by the city to remove garbage and refuse which householders were requested to pile at their curbsites. Collections were erratic and often the garbage

26 Bridenbaugh, Cities in Revolt, p. 15.
27 Schouler, p. 251.
28 Ibid.
29 Schouler, p. 256.
was swept away by the heavy rains and left to rot in the low places or in the "sinks" — holes dug to drain the water from the streets.  

With all its beauty, Philadelphia had serious shortcomings. But the late eighteenth century found essentially the same conditions existing in all of the leading cities of the United States. Philadelphia was no more remiss than other municipalities lacking adequate water and sewage systems. Municipal planning for healthful urban living had to await a later date.

In the summer of 1793 the second administration of President George Washington was but a few months old. Washington's second inaugural took place in the Senate chamber at noon on March 4 of that year. Justice Cushing administered the oath of office and the President read a short address.  

The chamber was filled to capacity that day and there was cheering afterward, but altogether the brief and formal ceremony was in keeping with Washington's desire to continue with no marked change. It was "a change that was not a change except as a matter of record, a transition so natural to the people that it was accepted as a matter of course . . . ."  

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31 Ibid.  
32 Schouler, p. 238.  
There was little change, as well, in domestic problems facing the administration. In the second presidential election the Anti-Federalists, opposed as ever to a "governmental elite of intellect and wealth," had waged an unsuccessful campaign to unseat Vice-President John Adams. The Anti-Federalists, or Republicans as they had come to be called, continued to feel that the Federalists' administration was "inclined to give to the wealthier and more intelligent few a very disproportionate influence in the government." Once again the people elected Washington unanimously, and Adams was sustained. Articles in Philip Freneau's National Gazette became more vigorous in criticism after the election. Freneau turned his attention from the administration to the President himself, identified Washington with "monarchial tendencies," and reflected upon his personal character. Washington had always considered himself above partisan politics and had consented to a second term only after the fervent pleas of his advisors that he alone could save the infant government from collapse. The President, disgusted by party strife, resented these attacks in the press. He said nothing, but to his sensitive soul Freneau's remarks were agonizing.

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36 Carroll and Ashworth, p. 6.
37 Ibid.
38 Ibid. See: Lewis Leary, That Rascal Freneau (New Brunswick: Rutgers University Press, 1941).
Divisions of party were growing more evident as opponents of Federalism were beginning to assume the regular style of an opposition. Still the Republicans were not as yet a political party "in the sense of a national organization with a center of operations." After the campaign of 1792 they held a majority of the seats in the House of Representatives for the first time, but the Senate as well as the Executive Branch of government was still predominately Federalist. The two parties represented opposite views on such fundamental issues as the national bank, foreign policy, and ideas of society in general. The Secretary of the Treasury, Alexander Hamilton, was the spokesman of the Federalists while the Republicans looked to Secretary of State Thomas Jefferson as a leader devoted to their cause.

Within the presidential cabinet, which had been retained in toto, the differences between the Secretary of State and the Secretary of the Treasury had long been evident. But the President wished to keep both men in his cabinet and was "not without hope that Jefferson and Hamilton might be reconciled in their actions as, in his belief, they were in their principles." As early as 1791 Jefferson and Hamilton were "committed to political war," and their differences

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39 DeCorde, p. 61.


41 Carroll and Ashworth, p. 31.

42 DeCorde, p. 57.
became greater as each sought to demolish the other's power.  

Jefferson, who had been in France for five years prior to accepting the office of Secretary of State, was amazed to find upon his return to the United States that England, the nation's former enemy and his "own object of distrust," was held in high esteem. Hamilton would fashion a continent on the English model: a balanced economy with commerce, industry, and banking — even society would be stratified — like that of England. Jefferson, on the other hand, would encourage commerce only as it supplied the needs of agriculture; he was for the "development of the individual without regard to limitations of class." When George Hammond, Britain's first accredited minister to the United States, arrived in October of 1791, he quickly established confidential relations with Hamilton — and this did much to increase the enmity between the two secretaries. Hammond claimed he

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43 Jefferson, resolving that his department would keep control over all matters which nominally concerned the State Department, wrote to Hamilton in regard to Ternant's application for advance payment on the French debt, which Hamilton had discussed with the President: with respect to these applications in general, they were of course to pass through me: but I considered them as depending too much on the arrangement of your department to permit myself to take & be tenacious of any particular ground . . . . (Jefferson to Hamilton, May 1, 1793; P.L. Ford (ed.), The Writings of Thomas Jefferson, VI (New York: G.P. Putnam's Sons, 1895), p. 235. Cf. Hamilton replied: I am thus particular from a desire that you may see the ground upon which I have proceeded, as it would give me pain that you should consider what has been done as the enfringement of a rule of official propriety. I assure you this was not my intention. (Hamilton to Jefferson, May 3, 1793; Henry C. Lodge (ed.), Works of Alexander Hamilton, VI, (New York: G.P. Putnam's Sons, 1886), pp. 40-41.  

44 DeConde, pp. 52-57.  

had no power to negotiate treaties of commerce, and he evaded Jefferson's attempts to discuss the British occupation of the Northwestern posts. His offer to evacuate the posts if the United States would pay the prewar debts and set up an Indian barrier state, neutral and independent but actually under British protection, was totally unacceptable to Jefferson. Even Hamilton was unwilling to consider this solution.

Anglo-American relations may have smoldered on the frontier as a result of British retention of the posts, but American commerce continued to flow to Britain. Trade between France and the United States, on the other hand, had been in contention since the end of the American Revolution. American vessels of limited tonnage were allowed to enter only specified ports in the French West Indies, and to exchange enumerated articles for molasses and rum only. French ports had been capriciously opened and closed to American commerce and a complex of restrictions practically prohibited trade, but a flourishing illegal commerce existed nonetheless. Amity between the two nations was far from the level of the Revolutionary years, but France and the United States were still

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bound by the treaties of 1778.

The beginning of the French Revolution in 1789 evoked admiration and keen feelings of fraternity on the part of many Americans, but there were notable exceptions to this enthusiasm. Such men as Washington, Hamilton, John Adams, and Gouverneur Morris, were skeptical of events in France from the first.\(^49\) When Santo Domingo was swept with the fervor of a slave rebellion in 1791, conservatives in the United States at first favored restoration of French authority; but the progress of the Revolution in France finally turned Federalists against restoration because it would mean revolutionary government in the island, and the molasses and rum trade was important to New England merchants.\(^50\)

The influx of French refugees in time required that cities and states make some provision for their welfare. One Philadelphia observer described them as

of various complexions . . . dressed in clothing of St. Domingo fashion, presenting a peculiarity of costume, and showing much gayety of manners. They filled the streets with French conversation by day, for they were all idlers, and with much music at night.\(^51\)

Jefferson was not so tolerant of the aristocratic refugees from Santo Domingo. He wrote: "I wish we could distribute our 400 (of them) among the Indians, who would teach them lessons of liberty & Equality."\(^52\)

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\(^{49}\text{DeConde, p. 141.}\)

\(^{50}\text{Montague, pp. 32-34.}\)


Until 1793 even some Federalists espoused the French Revolutionary cause. There appeared to be no danger of military involvement, and the successes of the constitutional experiment in France were cheered by Americans regardless of political inclination. Then, late in March of that year, rumors of a general European war reached Philadelphia, together with the news that the French Girondists had beheaded King Louis XVI and his queen.

Confirmation that the Republic of France had declared war against the monarchies of England and Spain caused President Washington to hasten his return from a brief sojourn in Virginia, and he arrived in Philadelphia on April 17. The cabinet was in agreement that neutrality should be maintained, Hamilton and Jefferson for different reasons. The proclamation signed by the President on April 22 did not actually contain the word "neutrality," but all citizens were enjoined to demonstrate

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53 DeConde, p. 86.
54 Carroll and Ashworth, pp. 41-43.
55 Ibid.
56 Jefferson advised delay, and the use of the American position to force to an issue the frontier grievances with both England and Spain. Hamilton opposed a policy of watchful waiting; peace with England was paramount. Jefferson argued that a neutrality declaration was an announcement that the President would not go to war and that the power to declare war belonged to Congress. Hamilton insisted that the President had ample authority to proclaim neutrality — at least until Congress convened again. See Charles M. Thomas, American Neutrality in 1793: A Study in Cabinet Government (New York: Columbia University Press, 1931). Cf. Charles S. Hyneman, The First American Neutrality: A Study of the American Understanding of Neutral Obligations during the Years 1792-1815 (Urbana: The University of Illinois Press, 1934) and William K. Woolery, The Relation of Thomas Jefferson to American Foreign Policy, 1783-1793 (Baltimore: Johns Hopkins Press, 1927).
impartial and friendly conduct toward all belligerent powers. Debate continued, however, on fine points of treaty law. How to interpret international law under the 1778 treaties with France and yet keep peace with Britain and avoid Spanish resentment and retaliation? This was the unprecedented diplomatic problem facing the government of the United States.  

Edmund Charles Genet, newly appointed envoy of the Republic of France, presented his credentials to the President on May 18 after having disembarked at Charleston some six weeks earlier. He had received enthusiastic welcomes at every stop on his overland journey to the capital, and now he marked the cool attitude of the President as out of character with the people of the United States. Genet set about immediately to fulfill his instructions to obtain material assistance for his country and mobilize American sympathy for the cause of France by organizing democratic societies. The French diplomat soon became the center of a storm which raged within the administration and throughout the country over the whole question of neutrality and the interpretation of international law. Genet's feverish activity in equipping privateers in American ports, in issuing military commissions to American citizens, and in appointing French consuls to act as

57 Bemis, A Diplomatic History, p. 92.
58 Hildreth, p. 416.
admiralty adjudicators in United States ports quickly earned him the animadversion of the entire cabinet.

By June, Genet's machinations had set the administration aghast. Jefferson, at first sympathetic to Genet, soon had cause to admonish the envoy:

The expression of friendly sentiment, which we have already had the satisfaction of receiving from you leave no room to doubt that the conclusions of the President, being thus made known to you, these vessels will be permitted to give no further umbrage by their presence in the Ports of the United States.

A month later Jefferson confided to James Madison that the French minister was impossible:

Never in my opinion, was so calamitous an appointment made, as that of the present minister of F. here: Hot headed, all imagination, no judgment, passionate, disrespectful I even understand towards P. resident in his written as well as verbal communications.

The best example of Genet's behavior was exhibited early in July. Secretary of the Treasury Hamilton, entrusted with the responsibility of enforcing neutrality regulations, brought the first violation up for prosecution. Two Americans enlisting for service aboard a French privateer in Charleston were arrested when that frigate came into the Philadelphia port. Genet protested their arrest and rushed

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60 DeConde, p. 208.
63 DeConde, p. 114.
to their defense, scoring his first victory as there was no law prohibiting foreign recruitment in the United States. Genet flaunted this most favorable jury decision and precipitated a crisis over the case of the Little Sarah, a small English merchant vessel which had been captured by a French frigate. Genet outfitted the vessel with cannon, rechristened it Petite Democrat, and readied it for sailing. Despite the orders of the Secretary of State and the protests of the President, the ship slipped out to sea from Philadelphia. On the 4th of August in an important meeting of the cabinet, "Rules Governing Belligerents" were promulgated so that there was no further question of how the administration stood on the matter of neutrality or the interpretation of the commercial treaty with France.

Early in August New York City teemed with excitement when a British warship was routed in a sea battle off Sandy Hook by the French frigate L'Embuscade, and the next day the French West Indies Fleet arrived in that port. Genet hastened to New York to take charge personally, but his reception was not remarkable. By this time newspapers carried the story that Genet had "actually maligned the President." Senator Rufus King and Chief Justice John Hay now made public their charge that Genet was trying to appeal to the American

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64 Ibid.
65 Carroll and Ashworth, pp. 101-104.
67 Carroll and Ashworth, p. 116.
68 Ibid.
people over the head of the President. Genet's letter to Washington, disavowing the accusation, was published in mid-August, but by now his popularity was fading. Even his staunchest supporters deserted him and he became a "lost cause." In a final meeting of the cabinet on August 23, 1793, the President signed the document requesting the recall of the French minister.

By late summer of 1793 the Federalist administration in Philadelphia was in a far from tranquil state. Even the President admitted that he:

was much hurried and indeed much perplexed with the disputes, memorials and what not, with which the Government were pestered by one or the other of the petulant representatives at War . . . . I have been more than ever overwhelmed with their complaints. In a word the trouble they give is hardly to be described . . . .

Republican newspapers kept alive the Anglo-French agitation with articles urging closer ties with France and support of the alliance with that nation. Counter-charges were embodied in editorials labelling France the aggressor and insisting that the alliance with that nation was at best only defensive. Federalists used the charge that Genet had "maligned the President" to best advantage because Washington's person and prestige was their greatest asset. Still the attacks on

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69 DeConde, p. 289.
70 Carroll and Ashworth, p. 118.
72 DeConde, p. 261.
the administration continued, and "more and more they were directed
against the man at its head."  Jefferson observed:

The President is not well. Little lingering fevers have been
hanging about him for a week . . . . He is also extremely affected
by the attacks made & kept upon him in the public papers. I think
he feels those things more than any person I ever yet met with.  

At meetings in various towns and cities, resolutions were passed
for and against the government's foreign policy and these resolves were
forwarded to the President.  But the national capital was the place
where the mood and temper of the citizens was in greatest evidence.
Congress was not in session to decide for or against the neutral
policies of the administration, but the President and his cabinet hardly
could remain oblivious to the most visible protests.  Notwithstanding
the fury and threat of Republican demonstrations, the administration
had undertaken to remove one cause of ferment by requesting the dis-
missal of Genet.  No sooner had this been done than an unseen enemy now
diverted the attention of the citizenry.  In late August of 1793, the
presence of yellow fever in Philadelphia was reported in the General
Advertiser.  Here was official recognition that the dreaded pestilence
had again arrived.  

73, 74, 75, 76, 77

73 Carroll and Ashworth, p. 119.
74 Jefferson to James Madison, June 9, 1793, in P.L. Ford (ed.),
The Writings of Thomas Jefferson, VI, pp. 292-293.
75 DeConde, p. 230.
76 Carroll and Ashworth, p. 119. "The protests of an orderly and
reasonable people were fast approaching the meaningless fury of a dis-
orderly and unintelligible mob."
77 Ibid.
CHAPTER III

THE SIEGE

When disease strikes a community in epidemic proportions, certain facts must be ascertained before measures can be instituted to prevent its further spread. The diagnosis of the disease, the mode of transmission, the source of the infection and the extent of the disease throughout the area must first be established before specific measures such as immunization, isolation, and quarantine can be instituted for the control of the epidemic outbreak.\(^1\) This investigation and control of epidemic disease becomes the responsibility of the epidemiologist. Because a broader concept of the epidemiologist's role has come into being in recent times, in addition to statistical research, all diseases are now studied in relation to the "inherent characteristics of the individual and to the external conditions surrounding him and determining his manner of life."\(^2\) This broader viewpoint was expressed


\(^2\) Ibid., p. 202. Doctor Smillie credits W.H. Frost with a new definition of epidemiology as "the science which will give, firstly, a picture of the occurrence, the distribution, and the types of the diseases of mankind in distinct epochs of time and at various points of the earth's surface; and secondly will render an account of the relations of these diseases to inherent characteristics of the individual and to the external conditions surrounding him and determining his manner of life."
in many of the eyewitness accounts of epidemic visitations in the past, and especially was this true of the yellow fever epidemic in Philadelphia in 1793.

Philadelphia boasted some eminent physicians in 1793, but none that may be regarded as epidemiologists. Nonetheless these reputable doctors, well trained for their profession as any in the world at that time, were not unaware of the severe exactions of epidemic disease. Epidemic manifestation of disease, however, was one of the imponderables of the age and could not truly be considered as within the province of the medical profession. Epidemics were caused by factors outside the control of these gentlemen-scientists educated in the old tradition of medical principles and practice. Still, many speculated at length and recorded their observations of epidemic disease. There were innumerable theories, in the main unsupported by facts, but facts on epidemic disease were not available in the late eighteenth century, a full century before the germ theory had gained wide acceptance. These early doctors were so unfortunate as to be "not entirely divested of the medieval tradition," as one writer has said, "while the very next generation witnessed the metamorphosis of this old art into a modern science."

Communicable disease was a regular visitant to the city of

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3 Winslow, Conquest of Epidemic Disease, p. 194.
4 Shryock, p. 48.
5 Ibid., p. 4.
Philadelphia, and its appearance in 1793 at first gave no great cause for alarm. The "fevers" were expected to make their annual or seasonal appearance. Numerous monographs on the more common ones describe them in such terms as "ordinary fevers," "autumnal remitting fevers," and "the usual forms of summer and autumnal diseases." Usually these writings ascribed the cause of the disease to some "mephitic condition of the air due to climate and season or to local pollution by decomposing organic matter." Doctor Benjamin Rush opened his several monographs on the various diseases with a careful description of weather conditions prior to their occurrence. Many doctors were climatists to some degree. It was obvious to them that "intermittents," or malaria, appeared only after a season of warm and rainy weather. Rush further contended that the clearing of forest lands, without draining and cultivation, was a factor in disease propagation, especially the "intermittent and bilious fevers." 

Rush was certain that the weather had much to do with the epidemics which visited Philadelphia that spring and summer of 1793. The damp and mild spring weather had brought on the mumps and "scarlatina anginosa," or scarlet fever, but after several warm days in May "the

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6 Dr. William Currie wrote *A Dissertation on the Autummal Remitting Fever* in 1783, and also *An Historical Account of the Climates and Diseases of the United States of America*. Dr. Benjamin Rush published four volumes of *Medical Inquiries and Observations* in 1794, 1797, 1809, and 1830.

7 Winslow, *Conquest of Epidemic Disease*, p. 231.

8 Rush, I, p. 144. "It is a well known fact, that intermittent and bilious fevers have increased in Pennsylvania in proportion as the Country has been cleared of its woods, in many parts of the State."
city was in general healthy. There were many warm days in June, and the weather was uniformly warm in July with the scarlatina continuing with "symptoms of great violence." In July "a few bilious remitting fevers" appeared, and by August dysentery, "colera morbus," and remitting fevers were common, the latter attended by some complications. During the last days of July, "a number of the distressed inhabitants of St. Domingo, who had escaped the desolation of fire and sword," disembarked at Philadelphia. Soon after their arrival the influenza appeared and spread rapidly. Rush describes these diseases as a matter of course. They were "universal," but "not attended with much mortality."

According to Rush, "there was something in the heat and drought of the summer months which was uncommon in their influence upon the human body." Laborers "gave out" even when the thermometer registered less than 84 degrees. On the 25th of August there was a heavy rain which was "remembered by the citizens of Philadelphia as the last that fell for many weeks afterward." Shortly thereafter

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9 Rush, III, p. 5.
10 Ibid.
11 Ibid., p. 6.
12 Ibid.
13 Ibid.
15 Ibid.
another writer commented on the weather, the rain in particular, in one of the most pertinent observations on this epidemic:

As the late rains will produce a great increase of mosquitoes in the city, distressing the sick, and troublesome to those who are well, I imagine it will be agreeable to the citizens to know that the increase of these poisonous insects may be diminished by a very simple and cheap mode, which accident discovered. Whoever will take the trouble to examine their rain-water tubs, will find millions of the mosquitoes (?) fishing about the water with great agility, in a state not quite prepared to emerge and fly off: take wine glass full of water, and it will exhibit them very distinctly. Into this glass pour a half teaspoon full, or less, of any common oil which will quickly diffuse over the surface, and by excluding the air, will destroy the whole brood. Some will survive two or three days but most will sink to the bottom, or adhere to the oil on the surface within twenty-four hours. A gill of oil poured into a common rain water cask, will be sufficient; large cisterns require more, and where water is drawn out by pump or by cock, the oil will remain undisturbed, and last for a considerable time.16

Probably this newspaper article passed largely unnoticed.

A single case, or several cases, of yellow fever did not occasion much alarm. Just who was the first patient recognized as a case of yellow fever will never be known. Mary Lear, wife of President Washington's secretary and a member of his household, died after a short illness during the last week of July, the cause of her death attributed to yellow fever.17 Doctor Rush saw the son of Doctor Hodges on the 5th of August, and the boy died on the 7th of yellow fever; Rush reported and listed this case as his first fatality.18 Rush saw five more cases

16. Dunlap's Daily Advertiser, August 29, 1793. The article was signed "A. B." Quoted in Powell, p. 23.

17. Carroll, p. 111; Eberlain, p. 171. "Polly's untimely death from yellow fever in July, 1793, was a real grief to the whole family . . . . Washington broke a rule and went to her funeral."

in the ensuing days, two patients dying and three recovering. But, as he observed, none of these cases:

excited least attention or apprehension, of the existence of a yellow fever in our city, for I had frequently seen sporadic cases in which the common bilious fever of Philadelphia had put on symptoms of great malignity, and terminated fatally in a few days, and now and then a yellow color on the skin before, or immediately after death.\(^{19}\)

Thus the onset of the 1793 epidemic was as insidious in nature as such disease outbreaks have ever been and continue to be.\(^{20}\) As only assumptions can be made at this distant date, it can safely be reasoned that existing conditions were propitious for a visitation by the pestilence. The city had been without a major outbreak of yellow fever since 1762,\(^{21}\) and this fact explains why many were susceptible to the disease. The weather was right for mosquito reproduction and, since mosquitoes were observed to be in abundance, it can be assumed that they were *Aedes Aegypti*. In what manner the virus of yellow fever was brought into the city can only be surmised. A mosquito bearing the

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\(^{19}\) *Ibid.* p. 10.

\(^{20}\) Even present-day epidemiologists have experienced similar situations. Smillie concluded (p. 212): "If we analyze these epidemiological studies of startling outbreaks of disease, were struck by the fact that in most instances the damage has already been done before the epidemiologist has even asked to make an investigation. In many instances the investigation has served to clear up a mystery, but has not saved many lives, nor prevented a single case of infection."

virus could well have come by ship from an infected West Indies port, for numerous ships from such ports frequented the port of Philadelphia; a patient in an infectious stage could have arrived aboard any ship.

Until after the middle of August the medical men of Philadelphia were not uneasy over the presence of yellow fever in the city. On the 19th of August, however, Doctor Rush was called into consultation over the case of Catherine LaMaigre, wife of one Peter LaMaigre, a merchant who lived on Water Street. Doctors Hugh Hodge and John Foulke were the attending physicians. Rush found Mrs. LaMaigre in the "last stages of a highly bilious fever," with constant vomiting and "great heat and burning in her stomach." Despite the prescriptions of a powerful cordial and tonics, the patient died the next day. Rush remarked to the two physicians that he "had seen an unusual number of bilious fevers, accompanied with symptoms of uncommon malignity," and that he "suspected all was not right in our city." They agreed, and Doctor Hodge related that four or five persons had recently died of the fever within the immediate area of the LaMaigre's door. Doctor Foulke pointed out the presence of some damaged coffee which had been

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22Sir Rupert Boyce, Health Progress and Administration in the West Indies (New York: E. P. Dutton & Company, 1910), p. 79. "The Stegoma calopus (now Aedes aegypti) can live as easily in the galley, forecastle, staterooms, and holds of a ship as in a house on shore."

23DuBois, p. 187. From the appearance of the first case of yellow fever to the outbreak of an epidemic are 14 days; from 1-6 days are the usual incubation periods in man; 4-20 days incubation period of Aedes, according to the temperature of the place.

24Rush, III, p. 11.

25Ibid.

26Ibid.
thrown upon a wharf in a direct line with the LaMaigre's door. The coffee had remained there since the 24th of July and had "putrefied . . . to the great annoyance of the whole neighborhood." All cases of the fever had been in the immediate neighborhood of the wharf, or could be traced to individuals who had visited victims in the area. It was in this manner, according to Rush, that the discovery of the malignity, the extent, and the origin of the fever was made known. He knew that it was highly contagious as well as mortal, and "did not hesitate to name it the Bilious Remitting Yellow Fever." 

Although Doctor Rush quickly informed several associates of his discovery the "report of a malignant and contagious fever being in town, spread in every direction, but it did not gain universal credit." In fact, Rush's fellow-physicians who had not seen a patient with the disease were inclined to scoff at the report, and many citizens did likewise. The report was "treated with ridicule or contempt." This was not unusual, according to Rush, as many physicians had "rendered themselves unpopular, and even odious to their fellow citizens, by giving the first notice of the existence of malignant and mortal disease." But the report soon gained so much ground that Governor

27 Ibid., p. 12.
28 Ibid., p. 13. (Italics mine).
30 Ibid., p. 15.
31 Ibid.
Thomas Mifflin of Pennsylvania requested an official inquiry by Doctor James Hutchinson, the "inspector of sickly vessels," who in turn inquired of his fellow physicians what they thought of the matter.  

Doctor Hutchinson now sought facts: did the disorder exist? in what part of the city was it? when was it introduced? and what was the cause of the disease? Rush framed his reply the same day he received Hutchinson's inquiry, which was August 24:

A malignant fever has lately appeared in our city, originating I believe from some damaged coffee, which putrefied on a wharf near Arch-street. The fever was confined for a while to Water-street, between Race and Arch-streets; but I have lately met with it in Second-street, and Kensington; but whether propagated by the contagion, or by the original exhalation, I cannot tell. The disease puts on all the intermediate forms of a mild, remittent, and a typhus gravior. I have not seen a fever of so much malignity, so general, since the year 1762.

Hutchinson published his findings in the form of a letter to Nathaniel Falconer, health officer of the port of Philadelphia. His statement embodied much of what Rush had written, but Hutchinson conducted some investigation on his own and found cases east of Front Street which were possibly the malignant fever. His estimate that about forty persons had died of the fever was considered too low by Rush, who wrote that the

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32 Ibid.
33 Rush, III, p. 16. Rush includes here the entire letter written to him by Doctor Hutchinson.
34 Rush, III, p. 17.
register of deaths showed the number to be "upwards of 150." 36

Doctor Hutchinson agreed with Rush as to the probable cause of the infection. In his report he stated: "the contagion originated from some damaged coffee, or other putrefied vegetable and animal matter," 37 but he qualified this statement. Dr. Benjamin Say had observed the disease in Kensington previous to its appearance in Water Street. This would mean that the coffee on the wharves above Arch Street could not be the "original source of the infection." 38 Hutchinson's general conclusion on the source of the infection resulted in a continued controversy among the medical men:

It does not appear to be an imported disease; for I have heard of no foreigners or sailors that have hitherto been infected; nor has it been found in any lodging-houses; but it is on the contrary, principally confined to the inhabitants of Water-street, and such as have done business, or had any considerable intercourse, with that part of the city. The Dispensary physicians tell me, that out of the large number of sick, now under the care of that charitable institution, they have had but one person afflicted with this fever. In the Pennsylvania Hospital, the disorder does not exist. 39

As a means of prevention, Doctor Hutchinson referred to the recommendations of the College of Physicians — "the means for preventing the future progress of the disease" 40 — which was published the same day.

37 American Daily Advertiser, August 28, 1793. Quoted in Rush, III, p. 19. This is still a part of Doctor Hutchinson's report.
38 Ibid., p. 20.
39 Ibid.
40 Ibid., p. 21.
Dr. John Redman, president of the College of Physicians, called this special meeting of the College to consider the problem of the fever, now recognized as prevalent in the city of Philadelphia. On the 25th of August, the same day as the hard rain, the elite of Philadelphia's medical profession gathered. Not all of the city's doctors were included in the College's illustrious membership, and not all who belonged were graduates of formal medical training programs. The majority, however, had completed formal medical training and had studied abroad, and the majority also were of the wealthier class. Many of Philadelphia's lesser-known doctors were undoubtedly as competent as the members of the College of Physicians, but to this group the medical profession looked for leadership and from this group came opinions that were acceptable to the profession as well as to government officials. A committee promptly drew up the set of resolutions, duly adopted by the entire body, which were published for the citizens of Philadelphia.

The College of Physicians considered the epidemic a "malignant and contagious fever," and the first measures advocated were in the nature of isolation procedures. The doctors advised that "all

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1 Rush, III, p. 21. Rush records that the president of the College of Physicians called the meeting; Powell (p. 21) states that Mayor Clarkson asked an opinion of the College and the meeting was then called. Rush does not mention that the opinion of the College was forwarded to Mayor Clarkson, but that it was published in the paper.

2 Bridenbaugh, Rebels and Gentlemen, p. 273; Powell, p. 32.

3 Rush, III, p. 22.

4 Ibid., pp. 21-22.
unnecessary intercourse should be avoided with such persons as are
affected by it," and instructed that a mark be placed on the door or
windows "of such houses as have any infected persons in it." Two
measures were in regard to the welfare of the victims:

To place the persons infected in the centre of large and
airy rooms, in beds without curtains, and to pay the strictest
regard to cleanliness, by frequently changing their body linen,
also by removing, as speedily as possible, all offensive matters
from their rooms.

To provide a large airy hospital, in the neighborhood of the
city, for the reception of such poor persons as cannot be
accommodated with the above advantages in private houses.\footnote{46}

The College made recommendations for improved sanitation throughout
the city. The streets and wharves of the city were to be kept as clean
as possible. Two recommendations involved psychological considerations:
the people were advised to "put a stop to the tolling of bells," and
"to bury such persons as die of the fever in carriages, and in as
private a manner as possible."\footnote{47} Recommendations of the College of
Physicians also contained advice for individuals: As the contagion
of the disease may be taken into the body and pass out of it, without
producing the fever, unless it be rendered active by some occasional
cause, the following means should be attended to, to prevent the con-
tagion being excited into action in the body.\footnote{48}

\footnote{45} Ibid., p. 22.
\footnote{46} Ibid.
\footnote{47} Ibid.
\footnote{48} Ibid., p. 23.
To avoid all fatigue of body or mind.

To avoid standing or sitting in the sun; also in a current of air, or in the evening air.

To accommodate the dress to the weather; and to exceed rather in warm than in cool clothing.

To avoid intemperance, but to use fermented liquors, such as wine, beer, and cyder, in moderation.

In addition, there were measures for all citizens to observe in preventing the spread of the contagion. The College deemed that the lighting of fires throughout the city was dangerous and they placed "more dependence upon the burning of gunpowder." Vinegar and camphor were of most benefit in the sickroom and "they cannot be used too frequently upon handkerchiefs, or in smelling bottles, by persons whose duty calls them to visit or attend the sick." This concluded the recommendations which were signed by William Shippen and Samuel Griffiths, vice-president and secretary, respectively, of the College of Physicians. The College did not speculate as to the origin of the epidemic. If the members did discuss the matter, their conclusions were not published.

But Doctor Rush was not content to let the matter rest here. His conviction that the coffee was the cause of it all was a point that he meant to prove beyond all doubt. His "short address" to the citizens

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49 Ibid.
50 Ibid., p. 23.
51 Ibid., pp. 23-24.
52 Ibid., p. 24.
of Philadelphia was published to refute the doubt cast by Doctor Hutchinson's article on the origin of the fever, and to "direct the attention of our citizens to the spot from whence this severe malady has been derived." Rush contended that even though some few of the first cases had been discovered in Kensington, these patients had "received the seeds of the disease on board their ship while she lay at or near Race-street wharf." It was well known, continued Rush, "that morbid exhalations produce fevers at the distance of two or three miles, where they are not opposed by houses, woods, or hilly country." Rush pointed out the relative merits, or ill effects, of different types of effluvia and exhalations. The article had no other effect, he wrote later, than to "produce fresh clamours" against his theory because "the citizens as well as most of the physicians of Philadelphia had adopted a traditional opinion, that the yellow fever could exist among us, only by importation from the West Indies."

As debate deepened over the origin of the fever, the epidemic continued its unchecked course. Rush advised many to leave the city, and sent his own sons to be with their mother who was visiting relatives in Trenton. Each letter to his wife mentioned the spread of the fever.

53 American Daily Advertiser, August 29, 1793, as quoted by Rush, III, p. 25.
54 Ibid.
55 Ibid.
From Water Street to Second Street, he wrote, "the disease spreads, and a most alarming apathy . . . prevails among our citizens. Our neighborhood will be desolate in a day or two." It was indeed a serious time, he lamented, and "Dejection sits upon every countenance." Rush was not hopeful that the situation would improve until the rains and frosts of October. Fearing that he would contract the disease, Rush asked for daily prayers. The awesomeness of the disease had made a vivid impression on the busy doctor. He wrote:

One of my patients stood up and shaved himself on the morning of the day he died. Livid spots on the body, a bleeding at the nose, from the gums, and from the bowels, and a vomiting of black matter in some instances close the scenes of life. The common remedies for malignant fevers have all failed.

As the death rate increased, scores of families made their exodus from the stricken city. As Rush conceded, "There is but one preventative that is certain, and that is 'to fly from it.'"

By early September, both private citizens and government officials were seriously considering the implications of the epidemic. In a letter to James Madison in which he reported on the latest conduct of the French envoy, Genet, Thomas Jefferson considered the danger of

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58 Ibid.
60 Ibid., p. 654.
the malignant fever and reported on its progress:

A malignant fever has been generated in the filth of Water street, which gives great alarm. About 70 people had died of it in two days ago, and as many more were ill of it. It has not got into most parts of the city, and is considerably infectious. At first 3 out of 4 died, now 1 out of 3. It comes with a pain in the head, sick stomach, then a little chill, fever, black vomiting and stools, and death from the 2d to the 8th day. Everybody who can is flying the city, and the panic of the country people is likely to add famine to disease. Though becoming less mortal, it is still spreading, and the heat of the weather is very unpropitious. I have withdrawn my daughter from the city, but am obliged to go to it every day myself.  

President Washington, who was in the midst of it all, was not unaware of the severity of the situation. On September 6 he wrote: "We are all well at present, but the city is very sickly and numbers dying daily." A subsequent letter to Hamilton expressed concern that the Secretary of the Treasury might have contracted the fever:

With extreme concern I receive the expression of your apprehension that you are in the first stages of the prevailing fever. I hope they are groundless, notwithstanding the malignancy of the disorder is so much abated, as with proper and timely applications not much is to be dreaded.  

As if to affirm his belief, the President appended an invitation that "it would be a very pleasing circumstance if a change so entirely favorable as to justify it, would permit your attendance, and to bring

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63 Washington to Hamilton, September 6, 1793. Ibid., p. 83.
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On September 9, while preparing for his regular autumn journey to Mount Vernon, the President took particular account of the epidemic. He instructed the Secretary of War:

I think it would not be prudent for you or the clerks in your office, or the office itself to be too much exposed to the malignant fever, which by well authenticated report, is spreading through the city: the means to avoid it your own judgment under existing circumstance must dictate.

Because of the public example it would give, Washington thought it might be unwise for him to return to Philadelphia as soon as he had originally planned. He wished Secretary Knox to write him every Monday, "informing me concisely of the then present state of matters."

The President asked Knox to keep an eye on his household "if by means of the Disorder my Household Affairs should be involved in any delicacy." The Chief Executive departed Philadelphia the next day, the 10th of September.

Fifty-six persons died on September 15, sixty-seven on September 16, and on the 17th eighty-one persons were buried. As the death rate mounted, so did the controversy among Philadelphia physicians. Newspapers now carried conflicting reports and statements by the doctors.

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64 Ibid., p. 84.
66 Ibid., p. 87.
67 Ibid.
68 Carroll, p. 123.
on all questions raised by the epidemic. How did the contagion start? What was the best method of treating the disorder? Was there only one malignant fever or were there two fevers raging among the populace? The medical profession was sharply divided, as well, over the matter of treatment and diagnosis. The citizens of Philadelphia were in general agreement with those doctors who insisted that the fever was imported. Rush, of course, was a leading contender in the entire controversy over the epidemic, but he could write with less emotion at a later date:

A more serious source of the distress arose from the dissensions of the physicians, about the nature and treatment of the fever. It was considered by some as a modification of the influenza, and by others as the Jail fever. Its various grades, and symptoms were considered as so many different diseases, all originating from different causes. There was the same contrariety in all the practice of the physicians as there was in their principles. The newspapers carried accounts of both to the public daily.70

Rush recognized his disadvantage in maintaining that the fever originated in Philadelphia, but he remained firm in his dissent from the opinion that the disease was imported. He reasoned:

In the present they will have a great advantage over me, for the prejudices of the citizens of Philadelphia are in their favor. Loathsome and dangerous diseases have been considered by all nations as of foreign extraction. The venereal disease and leprosy have no native country, if we believe all the

authors who have written upon their origin. 71

Doctor Rush arrived at his remedy early in September, and boldly proposed his regime of treatment as a life-saver. It was calomel that he now prescribed for all patients: "From 10 to 20 grains, with an equal quantity of jalap . . . . The patient should drink plentifully of chicken water or water gruel and lie in bed during the operation of the physic, for it generally sweats as copiously as it purges." 72 Rush had discarded his early remedies — ipecacuanha, "the bark" in all its forms, wine, brandy, and aromatics — and also the blisters to the limbs, neck and head, and the wrapping of the entire body in blankets dipped in warm vinegar. 73 After finding all these remedies ineffectual, Rush reviewed an old manuscript by Dr. John Mitchell describing his treatment of yellow fever in Virginia in 1774. In a moment, Rush said, his "ignorance and fears upon this subject" were dissipated; thenceforth he resolved to purge and bleed, regardless of the severity of the disease. 75

71Rush, III, p. 147. Boyce (1910), pp. 3-4: Boyce reports that "One of the most striking features in the history of yellow fever has been the marvelous ingenuity displayed by every country to blame some other part of the globe for giving the fever to them. Even today the islands vie with one another in reproaching each other for giving them the disease should an epidemic unfortunately arise. They are exceedingly touchy on the subject of these pestilences, and will never admit the parentage of a fever if they can help it."


73Rush, III, p. 194.

74W. B. Blanton, Medicine in Virginia in the Eighteenth Century (Richmond: Garrett & Massie, 1931), p. 116. Mitchell may have practiced in Virginia, Blanton reports, but there is little evidence to support this. His writings, however, were all acceptable to the medical profession.

75Rush, III, p. 199.
In the matter of diagnosis and treatment, Rush and his students and close associates formed one school; the opposing view was held by Doctors William Currie and Adam Kuhn. To Rush, there were two types of responses to the fever — "indirect and direct debility." The mild and severe forms of the disease were results of the different "exciting causes of the contagion" and precipitating factors which brought on the fever. These factors and causes, he felt, were always present in some degree or combination. Thus the severity of the disease depended upon which factor excited the contagion in each patient. Dr. William Currie published an opposing opinion in the September 20 issue of the Federal Gazette:

It affords me particular satisfaction, that I now have in my power to inform my fellow citizens, that the progress of the infectious fever, has greatly abated, and that with a little longer perseverance in avoiding intercourse with the infected, as far as humanity will permit, paying at the same time proper attention to fumigating and ventilating the houses, clothing, and utensils from whence the sick has been removed, or where they have been confined, the infection which has proved so mortal, will most certainly be entirely eradicated in a few more days.

With this optimistic note Doctor Currie went on to state that only some forty or fifty persons in the whole city were actually afflicted with the malignant infectious fever — but there was another formidable disease present which affected some 1,000 people. This second disease was not infectious, said Currie; it was only the common "remittent" or "fall fever," and was vastly different from the infectious disease.

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76 Rush, III, p. 28.
78 Ibid., p. 231.
Doctor Currie declared that Rush's treatment was satisfactory for the remitting fever, but for the infectious yellow fever the prescribed treatment of one Doctor Stevens was the only acceptable method. Stevens had gained considerable stature for a successful treatment of Alexander Hamilton and his wife. Stevens' method of treatment was described in full in the General Advertiser and endorsed by a testimonial from the Secretary of the Treasury. Dr. Edward Stevens, lately of St. Croix and reputedly a practitioner of some experience with yellow fever, had a lengthy regime of treatment for the disease. In the main it was conservative, supportive, and reassuring; in detail it implied that the physician must devote considerable time to observing and attending the patient. With the first symptoms of languor or lassitude, Doctor Stevens would put the patient to rest, avoiding all fatigue of body or mind, and guard against anything that might debilitate him. He prescribed a full diet, more cordials than usual, cold baths, gentle opiates, and "a few grains of volatile salts and some aromatic ... administered at night." The "bark" was prescribed according to the varying symptoms the patient might present: "Keep the mind of the patient calm, serene, neither terrifying nor alarm

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79 Rush, III, p. 231.
80 General Advertiser, September 13, 1793, carried Hamilton's testimonial. Cited in Rush, III, p. 213.
81 Rush, III, p. 216. Rush quotes the entire remedy as prescribed by Doctor Stevens.
with needless apprehension, or by the melancholy relation of the spreading mortality surrounding him." With this attention at the beginning, the disease might be rendered mild and terminate favorably.

The remainder of Doctor Stevens' treatment was to alleviate and mitigate symptoms: of nausea and vomiting with "an infusion of camomile flowers"; of temperature with a cold bath every two hours followed by a glass of madeira and, if the patient worsened, injections "containing an ounce of powdered bark mixed with a thin salap or sago, to which a teaspoon of laudanum has been added." For comfort Stevens recommended "flannel cloths wrung out of spirits of wine, impregnated with spices . . . applied to the pit of the stomach." All emetics or cathartics should be avoided, he said, and the bowels kept sufficiently open with clysters. This regime had been suggested to Doctor Rush early in the epidemic, and he testified that he had tried Doctor Stevens' remedies but found them of no avail. Rush contended that his own method had saved "29 out of 30 of all to whom I am called on the first day, and many to whom I am called after it." But other doctors were not enthusiastic about Rush's remedy. "Some of my

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82 Ibid., p. 219.
84 Rush, III, p. 194.
brethen," he said, "rail at my new remedy, but they have seen little of the disease, and some of them not a single patient." His treatment was not accepted, he said, because "my method is too simple for them."

Friends of long standing became enemies as the physicians stood divided over the epidemic. Rush kept a record of the doctors who had left the city, and those who became patients themselves. On the 15th of September, Rush reported to his wife that he too had a case of the fever, but that he had recovered. This did not deter his treating the victims; nor did it lessen the bitterness with which he viewed colleagues who did not agree with him: "Thinking people submit to my method of treating the disorder, but many, very many, follow that which was dictated by Dr. Shippen’s learned and sagacious friend Dr. Kuhn ... Dr. Kuhn is fled to Bethlehem, Dr. Stevens to New York, and Dr. Shippen is nobody knows where." Rush sent some patients that he could not treat, due to the pressure of those who were already under his care, to his former pupils. All of them

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86 Ibid.
88 Rush to Mrs. Julia Rush, September 16, 1793. Butterfield’s Letters of Benjamin Rush, II, pp. 664-665. "Since writing the above I have had an attack of the disorder, but in consequence of losing blood and taking one of my purges, I am now perfectly well — so much so that I rested better last night than I have done for a week past. Thus you see that I have proved upon my own body that the yellow fever when treated in the new way is no more than a common cold."
adopted his method of treatment; but, Rush said, "the rest continue to murder by rule. Nor is this all. They have confederated against me in every part of the city . . . . Our neighbor Davidson died yesterday under the use of bark, laudanum, and the cold bath administered by the hands of Dr. Currie. Indeed the principle mortality of the disease now is from the doctors."  

Philadelphia in ordinary times recorded some five to six deaths daily. On the 24th of September, 1793, the daily record reached ninety-six, and by the end of September it was known that a total of 1,442 persons had died during the month. By now Rush was certain of his diagnosis, and could describe the entire course of the disease in considerable detail. Premonitory signs were a dull pain in the right side, heat in the stomach, pain in the head, costiveness, flatulency, night sweats, and defects of appetite. The precursory symptoms, however, were not always present. Rush confessed:

Frequent as the precursors of the fever were, they were not universal. Many went to bed in good health, and awoke in the night with a chilly fit. Many rose in the morning after regular and natural sleep, and were seized at their work, or after a walk with a sudden and unexpected attack of the fever.

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91 Rush, III, p. 129.
92 Ibid., pp. 76-77.
93 Ibid., p. 77.
Numerous patients exhibited different symptoms of the disease as well. The fever, Rush observed, seemed to have "counterfeited nearly all the acute and chronic diseases to which the human body is subject." \(^94\)

But Rush was positive that this was the only disease afflicting Philadelphia. His firmness in this belief was expressed in these words:

> It has been an axiom of medicine, time immemorial, that no two contagious fevers of unequal force can exist long together in the same place. As this axiom seems to have been forgotten by many of the physicians of Philadelphia, and as ignorance or neglect of it, led to that contrariety of opinion and practice, which unhappily took place in the treatment of the disorder, I hope I shall be excused by those physicians to whom this fact is as familiar as the most simple law of nature, if I will fill a few pages with proofs of it, from practical writers.\(^95\)

Rush could cite numerous instances, from early history to modern, where plagues and pestilences became the only existing disease during their visitation. He recalled that "Thucydides long ago remarked that the plague chased all other disease from Athens, or obliged them to change their nature, by assuming some of its symptoms." \(^96\) As far as Rush was concerned, no further argument was needed to prove that yellow fever alone was the reigning disease in Philadelphia. \(^97\)

In defense of this theory, Rush enumerated all the effects of

\(^94\) Ibid., p. 76.
\(^95\) Ibid., p. 85.
\(^96\) Ibid.
\(^97\) Winslow, Conquest of Epidemic Disease, p. 81: "Thucydides advances the idea of Transmutation of one disease into another which was to hamper epidemiological thinking up to the days of Sydenham and beyond."
yellow fever on the human body by systems, organs, extremities, and mental changes as a result of the infection. Post-mortem examinations conducted by Dr. Philip S. Physick had revealed little in the way of pathological change in body tissue; but Rush insisted that the cases selected for such examination had been those in which death followed relatively light cases of the fever.  

Rush made a number of curious observations on the disease itself. He attempted to pinpoint disease incidence according to race, occupation, preventative measures, and numerous other factors that might prove important in future outbreaks. That the refugees from the French West Indies escaped it, but that the natives of France who were in the city did not, was one observation. Rush thought that Africans were immune to the disease, but later found that he was mistaken. Servant girls and menials in general were more prone than others, according to Rush, and people who lived in wood houses had the disease more frequently than those who lived in brick houses.

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98 Rush, III, pp. 120-121. Dr. Physick's autopsy reports are included in full.

99 Ibid., p. 94.

100 Ibid., pp. 96-97. Rush published in an appeal to negroes that they "were not liable to the fever" and consequently would be good attendants for the sick. The negroes responded with an article published in the Mail, September 6, 1793, which stated that the African Society would furnish nurses or attend the afflicted, that those desiring such service should contact Absalom Jones and William Gray (Rush, III, p. 97). Later Rush admitted that the Africans took the disease the same as white people, and that many of them died of it.

People who shut themselves in their houses escaped the epidemic, Rush thought, and many went to sea to escape it, the pure air of the sea obviously being the determining factor which preserved them. Kind of employment did not figure in Rush's investigation; it had no effect upon disease incidence except in the case of gravediggers. "The fact is not new that gravediggers escaped the contagion of malignant fever," Rush wrote, observing that there were quite a few persons employed in that business. By going to church one did not expose himself to the fever, said Rush, because the houses of worship were during the week shut up and consequently the air was free from contagion.

As for preventive measures, Rush came to the conclusion that few were effective. He could see no advantage in using vinegar, camphor, tar, or volatile salts; nor did the whitewashing of walls secure the family from contagion. Bark and wine were equally ineffectual. Of all of them Rush concluded: "I am disposed to believe garlick was the only substance that was in any degree useful, in preventing the disorder . . . . All other substances seemed to do harm by begetting false confidence in the mind, to the exclusion of more rational preservatives." An advocate of strict temperance, Rush

102 Ibid., p. 100.
103 Ibid., p. 102.
104 Ibid., p. 103.
105 Ibid., p. 99.
106 Ibid.
had to change his opinion on ardent spirits. He first thought that
intemperance predisposed to the disease. Then he conceded: "... there are several instances of persons having escaped it who were
constantly under the influence of strong drink. The stimulus of ardent
spirits, probably predominated over the stimulus of the contagion, and
thus excited an artificial fever which defended the system from that
which was epidemic."

After mid-September "the atmosphere of every street was loaded
with contagion," and every citizen exhibited one or more marks of
infection. There were few people who looked healthy, and the smell
of contagion was everywhere. A patient could be in a clean room and
yet a smell like that of small-pox emanated from it. Putrid smells —
a mixture of contagion and excretions and secretions — were especially
noticeable in small rooms where four or five patients were dying. The
effluvia produced giddiness, a "sickness at stomach, a weakness of the
limbs, faintness, and in some cases diarrhoea." It was small wonder
that people fled the city or shut themselves up in their houses.
Business began to languish, and the streets became deserted as many
people suffered from poverty as well as the disease. Only those in
quest of a physician were abroad; only the hearse "kept up the remem-
brance of noise of carriages or carts in the city... funeral

107 Ibid., p. 100.
108 Ibid., p. 104.
109 Ibid., p. 107.
processions were laid aside . . . a black man, leading or driving a horse, with a corpse on a pair of chair wheels, with now and then half a dozen relatives walking back. 110

The highest mortality rate was reached on October 11 when 119 persons died. 111 For several days thereafter the daily total of deaths exceeded 100, and then the number gradually declined until the end of the month. On November 8 the death rate assumed the usual proportions for Philadelphia. 112 Rush noted the abatement of the fever with considerable relief. He had suffered two relapses himself and was physically exhausted, but he remained resolute in his view on origins and treatment. By now he had few professional friends and had lost three of his students in the epidemic. He had suffered personal grief with the loss of his sister and close friends. Physically and emotionally spent, he wrote:

No one physician except Dr. Griffiths and Dr. Annan has sent to inquire after my health since my last confinement. The confederacy is now stronger than ever against me. Wistar is or will be the head of it. He knows that he has injured me, and therefore he cannot forgive me. Many, many persons I fear are killed now by bark, wine, and laudanum to spite me. Their rancor has no bounds. They watch my patients with great solicitude, and console themselves under my numerous cures by declaring that my patients had nothing but the common fall fever. The few whom I lose they say died of the yellow fever

110 Ibid., p. 125.
111 Ibid., p. 129.
112 Ibid., p. 130.
and are all killed by mercury and bleeding. 113

No records were maintained, unfortunately, by either group of physicians, and it is impossible to say with certainty which treatment was the most effective. No do the registers of deaths reveal how many of the total number — 4,044 in all — were actually victims of the yellow fever. 114 Nor can any estimate be made at this distant date of how many persons in Philadelphia were actually ill and subsequently recovered. The physicians prescribing so assiduously in Philadelphia in 1793 would no doubt have been amazed to discover that there was no "cure" for yellow fever then and none some 167 years later. 115

Both groups of physicians had good reasons for prescribing their

113 Rush to Mrs. Julia Rush, October 17, 1793. Butterfield's Letters of Benjamin Rush, II, p. 717. Compare this comment with a previous one dated 29 August, 1793: "Dr. Wister and myself consult much together, and I derive great support and assistance from him in all my attempts to stop the progress of this terrible malady. He is an excellent man, and rises in humanity and activity with the danger and distress of his fellow citizens." p. 645.

114 Rush, III, p. 130.

115 Stanley H. Banks, Modern Practice in Infectious Fevers (New York: Paul B. Hoeber, Inc., 1951), p. 764. This resume of treatment for yellow fever by Doctor Banks is in agreement with the majority of authorities on that disease: "There is no specific treatment once symptoms have developed. Immune serum is valueless; it may abort or modify the attack if given in doses of 10-20 millilitres immediately after infection. In a mosquito-infected area, all cases of jaundice must be nursed under a mosquito net for the first four days of illness. At the commencement of the attack, as constipation is common, it is traditional to administer a purge although the evidence that it is of value is non-existent. The patient should drink copious fluids containing glucose . . . no food by mouth . . . Vitamin K in the early stages may be of value to prevent hemorrhages . . . glucose saline solution IV if vomiting is severe . . . Ice bags, cool room, hot packs to loin to stimulate the flow of urine. Antibiotics including penicillin, streptomycin, chloranphenical, and aureomycin have no action in the virus."
preferred treatment. History has been more in sympathy with Doctor Rush even though his treatment was later deemed to be in error. Credit has been given him for his courage and stamina in staying with the helpless victims and inspiring some degree of confidence, and for treating victims of the fever who were ordinary citizens as well as those who were of higher estate. Rush had no personal motives of material gain in attempting to cope with the disaster, and he even described his treatment in print for all to follow. Finally, his serious and persistent investigations yielded some measure of truth for all those who would practice medicine and try to solve the enigma

116 Shryock, p. 48. "Much may be forgiven Benjamin Rush, for instance, if his dogmatic statements are recalled only in connection with the actual circumstances of his career. One should go with him through the desolate streets of Philadelphia, during the appalling yellow fever epidemic of 1793 — past the dead-carts with furtive figures walking well in the rear, into houses in which only children remained to greet the doctor silently, and then back to his own house to find both mother and sister desperately ill. Would there be no end to the heat, the dreadful fever, and the dying? Surely something could be done; some remedy must be found! Would it not have seemed sheer frivolity to have spoken then of "suspended judgment" or of "scientific caution"? One grasped at any hint in such emergencies, worked it up into a complete treatment, and tried to believe that all recoveries which followed were due to its employment. Soon one had a cure, and hastened to announce it to a public which also wished to believe. In a word, while true medical science often waited upon progress in other sciences, medical practice could rarely afford to wait."

117 Federal Gazette, September 12, 1793. This article entitled "To His Fellow Citizens — Treatment of Yellow Fever" is cited in Butterfield's Letters of Benjamin Rush, II, p. 660.

118 Rush to Mrs. Julia Rush, October 14, 1793: "You know that I have always pitied this humble class of people, and I am happy in reflecting now that I never added a bill to the distresses of any of them," Butterfield's Letters of Benjamin Rush, II, p. 716.
of yellow fever.

Rush, a discerning clinician, relied upon his calomel and jalap remedy. He believed the liver to be either inflamed or obstructed, with the bile "much vitiated in the gall bladder or in the small bowels." The calomel, he said, "expels the latter and opens the obstruction of the former." He later found bleeding to be "very useful since the weather has become cool, after the bowels are well cleansed, provided the pulse be full and tense." To the College of Physicians, Rush gave his reason for adopting the lancet in yellow fever: the state of pulse arose from an inflamed brain, which was demonstrated by a "preternatural dilation of the pupils of the eyes." It was unsafe, Rush said, to depend upon the state of the pulse during the remissions of fever and pain because this was indicative of the need for more bleeding and more purging. But Rush was insistent as he wrote: "I consider intrepidity in the use of the lancet . . . to be necessary as it is in the use of mercury and jalap in this insidious and ferocious disease." Doctor Currie did not take issue over the regime of treatment advocated by Rush; he even recommended Rush's

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122 Ibid.
treatment — except that it was for the wrong disease. Currie, who would perform this same treatment for the common remitting fever but not for yellow fever, continued to insist that there were two distinct diseases in the city of Philadelphia.

Doctor Rush, the climatist of that age, felt that contagion was everywhere in the city of Philadelphia and prayed for a change in the weather to dispel it. "I despair under the present circumstances of the disease being checked till we have frost and heavy rains," he wrote. He changed his mind about advising everyone to flee the city; Philadelphia was under the power of medicine, and "the citizens who now wish to fly into the country cannot avoid carrying the infection with them." But for those who had left earlier, it was not prudent for them to return until after the frost and heavy rains, "both of which alike weaken or destroy the contagion of yellow fever." The disease appeared to be circumscribed by the limits of Philadelphia; it was not conveyed outside the immediate area. Rush observed this, as did both Washington and Jefferson. But whether Rush was motivated by the fact that "many of the sick suffer greatly from the want of

126 Ibid.
127 Jefferson to Thomas Mann Randolph, November 2, 1793. Ford's Writings of Thomas Jefferson, p. 438. Washington to Jonathan Trumbull, Fitzpatrick's Writings of George Washington, XXXIII, p. 120.
assistance of bleeders and the attendance of nurses and friends," or that he believed the disease could not be transmitted from person to person, he advised it was no more dangerous to attend the sick and visit them than to walk in the streets.

In his epidemiological thinking Rush followed the best authorities of his time. The season was surely an influential factor even if Rush placed little credence in the idea of an "epidemic constitution of the atmosphere." Faced with the choice between contagion and local miasms regarding propagation of the disease, Rush conceived the notion that a primary miasmatic influence which later resulted in contagion was the cause of this outbreak of yellow fever. The immunity of certain people remained a puzzling factor in this epidemic. Of much more important consideration were these questions: was the disease imported from the West Indies and why was the epidemic limited to the city of Philadelphia if the disease was contagious? The city was becoming bankrupt; financial losses estimated in the millions. Both the state and national governments would be speedily removed if Philadelphia itself was determined to be at fault for an epidemic of such proportions. Not only were the physical

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129 Ibid.
130 Winslow, Conquest of Epidemic Disease, p. v.
131 Dunaway, p. 343. The commercial losses alone incurred by the epidemic were estimated at over two million.
exactions high but public morale was badly shaken. As Matthew Carey observed, "The consternation of the people of Philadelphia at this period was carried beyond all bounds." 132 Carey reported:

While affairs were in this deplorable state, and the people at the lowest ebb of despair, we cannot be astonished at the frightful scenes enacted, which seemed to indicate a total dissolution of the bonds of society in the nearest and dearest connections . . . . 133

The medical men could have their controversy, but solutions must be provided somehow for economic and political repercussions of the pestilential visitation.


133 Ibid., p. 231.
CHAPTER IV

THE RECOVERY

To the Pennsylvania legislature, convening in Philadelphia that last week of August, 1793, nothing was so important as the pestilence in the city. Speaker Samuel Powell apprized Doctor Rush of the apprehensions of the members and expressed doubt that they could be kept in town unless reassurances were forthcoming. Governor Thomas Mifflin, addressing both houses on the 5th of September, informed them that a malignant fever was raging in the West Indies Islands. The legislators took prompt action; on that same day they presented a "Supplementary Act to prevent infectious diseases being brought into this province." This bill, which granted emergency power to the Governor, was hastily passed, and the legislature adjourned. The

1Powell to Rush, Sept. n.d., 1793: "The Apprehensions of many of the Members are great, & if you can enable me to allay them, the public Business will probably proceed, but should the Case unfortunately prove otherwise I believe that it will be impracticable to keep the Members in Town." Cited in Powell, p. 66.


3Ibid. "A Committee of the Senate . . . waited upon the Governor and delivered an answer to his address to the Legislature." No further action is recorded on the part of the legislature until they were summoned to meet on November 8, 1793.

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colonial quarantine measure was thus revived, without so much as a change of the wording from "province" to Commonwealth:

the Health Officer is instructed to give immediate orders to the Pilots not to bring any vessel arriving from any of those Islands higher than little Mud Island until an examination has taken place by him and the Physician of the Port that no vessel be brought up into the city on board of which there is any sick person till she has been examined from whatever quarters she may arrive and whatever may be the number of the crew.4

Governor Mifflin instructed Mayor Matthew Clarkson to prohibit any disembarkation from the ship Hope, which had arrived from Londonderry with sick passengers.5 The Governor had also issued instructions to the mayor in regard to the sailors who were expected to arrive on French frigates from New York. Militia, with four field pieces, were to parade the heights above Philip's old rope-walk and be in readiness at the request of the Sheriff or any other Civil Magistrate to give all lawful assistance for the execution of a Warrant duly issued for apprehending the said French Sailors; and for the preservation of the public peace.6

The Governor notified the French consul and informed the Adjutant General of Pennsylvania, and the President of the United States of his actions. The President was requested to authorize the use of Captain Sedan's Company until the militia were prepared to "discharge the duty which the occasion requires."7

4 Pennsylvania Archives, p. 658.
5 Ibid., p. 656.
6 Ibid.
7 Ibid., p. 657.
On September 6 Governor Mifflin appointed Doctors James Mease and Samuel Duffield as joint physicians of the Port of Philadelphia. Dr. James Hutchinson who had held that post, died that evening. The new appointees were to pay constant attention to every measure that is calculated either to prevent the introduction of any malignant complaint from abroad or to relieve the public from the Calamity which at present prevails in doing which it is understood that is meant his vigilance should be directed to the Patients at the Hospital.

By the same memorandum two assistants were authorized, "at the pay of three dollars per diem each until further orders," to assist the Health Officers, who were also to employ a boat with a sufficient number of hands for the purpose of visiting all vessels." Having instituted such safeguards as he deemed necessary, Governor Mifflin departed the stricken city.

Mayor Clarkson now was left to deal with the multitude of problems arising from the epidemic. The Governor, who had enjoined him to take vigorous measures, assured Clarkson that the legislature would "bear any expense of any necessary action the alderman and council refused to pay for." The College of Physicians had advised that the

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9 Pennsylvania Archives, pp. 659-660.

10 Ibid.

11 Powell, p. 68.

12 Mifflin to Clarkson, August 29, 1793. Quoted in Powell, p. 54.
city be thoroughly cleaned, and that the wharves and streets be freed of decaying coffee and rubbish. At best Philadelphia had meager resources of men and money for such purposes, and now there was a greater scarcity of both with business at a standstill and the citizens in flight. The mayor observed that city officials were among those fleeing; and no scavengers could be hired to remove the coffee designated as the cause of the contagion. But the most pressing problem was how to care for the sick and dying — and then how to bury the dead. On the 18th of September Doctor Rush painted this deplorable picture:

Many die without nurses. Some perish from the want of a draught of water. Parents desert their children as soon as they are infected, and in every room you enter, you see no person but a solitary black man or woman near the sick. Many people thrust their parents into the street as soon as they complain of a headache.

Overseers and Guardians of the Poor were the city-appointed officials whose duty it was to care for the indigent, but by early September they had been sorely overtaxed as businesses shut down and commerce ceased throughout the city. The added burden of the sick poor had so increased their responsibilities that by now they found it impossible to fulfill demands or to handle their problems in any

satisfactory manner. As some of the guardians and overseers became ill or fled, those who remained were faced with overwhelming work.

Where to care for the sick? The Pennsylvania Hospital barred infectious cases from its doors. Who would care for the sick when all were in terror of the disease? "Ricketts' Circus", an enclosed amphitheater, had been designated for the sick poor. Paupers were transported to the amphitheater and died there; no one was appointed to see to their care.

When the dead were left to putrefy in the building, neighbors objected strenuously to the use of the circus as a hospital and, according to one historian, even threatened to set fire to the building. The hospital was speedily removed to a distant site.

The new site was an empty mansion on the outskirts of the city, formerly the property of Andrew Hamilton, and called Bush Hill. City officials took over the house without permission of the owners, and transported the sick poor there -- where they died of neglect. This.

16 Powell, p. 59.
17 Carroll, p. 58.
18 Schouler, p. 255.
19 Ibid.
20 Matthew Carey, A Short Account of the Malignant Yellow Fever Lately Prevalent in Philadelphia, 1st ed., November 13, 1793, published by the author, contains the following description: "A profligate - abandoned set of nurses and attendants (hardly any of good character could at that time be procured) rioted on the provisions and comforts provided for the sick, who (unless at the hours when the doctors attended) were left almost destitute of every assistance." Quoted in Howard A. Kelly, Walter Reed and Yellow Fever (Baltimore: Norman, Remington Company, 1906), p. 233.
place soon acquired the reputation of a "human slaughter house," and its name became synonymous with death. The four physicians appointed by Mayor Clarkson to attend patients at Bush Hill found such confusion and desolation that it was virtually impossible to give treatment. There were no managers to procure supplies, and the attendants who could be hired were untrained and of questionable character.

On the 10th of September Mayor Clarkson published an address "To the Benevolent Citizens," calling for a meeting to consider the distress of the city. From the citizens who responded to the mayor's call, committees of volunteers were formed. In particular, the mayor's meeting considered the situation at Bush Hill and heard all the reports labelling it a "fantastic purgatory." A volunteer committee of Stephen Girard and Peter Helm now took over the management of the hospital and finally made it a reputable place for the care of the yellow fever victims. Girard and Helm obtained responsible nurses and attendants and saw that the doctors' prescriptions for treatment were carried out. Even paupers now received medical attention worthy of the name. There, of course, were some differences between resident

21 Schouler, p. 255. "This hospital, filthily kept and poorly served ... acquired the repute of a human slaughter house."

22 Rush to Mrs. Julia Rush, October 14, 1793. "Half the servants in the city have deserted their masters, and no wonder, for they were much exposed from the nature of their duty to taking the disorder, and when sick suffered and died by neglect or were sent to the hospital at Bush Hill." Butterfield's Letters of Benjamin Rush, II, p. 716.

23 Powell, p. 143.

24 Ibid.
physicians as to the manner of treatment. But, because many of the appointed doctors themselves became ill of the fever, French refugee physicians took over and worked satisfactorily with Stephen Girard to the credit of them all.25

Other volunteer committees were assigned to attend to the necessities of the poor in the city. Israel Israel and Samuel Benge formed one committee that went about gathering information and investigating needs.26 Food, clothing, and shelter had to be provided for orphaned children. Receipt and distribution of funds became the responsibility of the "Mayor's Committee" as donations came to Philadelphia from other cities and communities.27 The usual contribution was money, but other supplies were also forthcoming. Boston sent 6,216 gallons of vinegar and 7,800 pounds of candles.28 To keep a city going even though the ordinary processes of government had ceased, numerous volunteers had to perform many tasks.29 Many of these tasks were menial and highly unpleasant — such as the removal

25Rush does not mention the French physicians by name or credit them with their major contribution in the treatment of the numerous patients at Bush Hill. Doctor Jean DeVese became an authority on the treatment of yellow fever. Rush frequently mentions "French Doctors" but in reference to those physicians who prescribed Dr. Stevens' regime of treatment.

26Powell, p. 144.

27Numerous donations of money were received and transmitted to the Relief Committee from October to November, 1793.

28Powell, p. 233.

29It is indeed regrettable that the names of these gallant volunteers were not recorded. Evidently no man could be spared for official note-taking.
of the rubbish and garbage — but somehow they were done. Orphans were cared for, the hungry fed, the sick poor provided with a hospital, and the dead were buried.

Ships continued to come into the port of Philadelphia and, with officials and the appointed physicians now ill of the fever, there was no one to stop passengers from disembarking and roaming the abandoned streets of the city. Coffee houses and taverns were closed, there were no meetings or assemblies, and the few people who stopped to engage in conversation were on the most urgent business. Since the mayor's court was suspended, Rush considered it remarkable that crimes of great stature did not occur during this period of Philadelphia's history. Whatever government was in evidence was conducted by the people themselves; it existed, as one historian has said, mainly in the form of a "common resistance to the dread destroyer."

Of the several newspapers that Philadelphia had boasted, only the Federal Gazette now continued publication. Mail was still brought into the city even though the post office had suspended operations, but there was delay and confusion in the delivery. Much of the mail was

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30 Powell, p. 69.
31 Rush to Rachel Rush Montgomery, September 18, 1793: "Our streets are nearly deserted. Nobody is seen in them but persons hunting doctors, nurses, and gravediggers." Butterfield's Letters of Benjamin Rush, p. 667.
32 Rush, III, p. 137.
33 Schouler, p. 255.
34 Powell, p. 260.
not delivered at all, and citizens had to go to the University to get letters.

There was little difficulty getting into the city of Philadelphia, but it was no easy matter to leave it. Few communities offered hospitality to the fugitives from the stricken city, and more passed restrictions and resolutions barring their own citizens from taking anyone from Philadelphia into their homes. Germantown was thought to contain half the fleeing population, which was estimated at between seventeen and twenty thousands. Wilmington, Elkton, Elizabethtown, and Springfield also offered havens to the refugees; but Baltimore, Hagerstown, and Trenton had constables and militia patrolling all roads leading from Philadelphia to these cities. The states of Massachusetts, New York, Rhode Island, and Virginia enacted special measures placing all ships from Philadelphia in three to four-week quarantine status. At New York the fugitives, their baggage, and all merchandise aboard vessels from Philadelphia had to be washed with vinegar, and the

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35 Rush to Mrs. Julia Rush, October 6, 1793: "It is not in my power to answer them letters regularly . . . for they are often detained in the post office two or three days before I can get them. Confusion and distress pervade every branch of business at the present time in Philadelphia." Butterfield's Letters of Benjamin Rush, p. 704.

36 Schouler, p. 253.

37 Powell, p. 226.

38 Powell, p. 225.
ships "fumigated with repeated explosions of gunpowder." 39

President Washington himself had encountered no difficulty in leaving Philadelphia or in proceeding southward, and Secretary of State Jefferson had also left the city without mishap. But Alexander Hamilton and his wife, whose bout with the yellow fever had received wide publicity, were refused admission to Albany and were obliged to stay in Green Bush, opposite that city, until five doctors ascertained their state of health. 41

When Secretary of War Knox, whom Washington asked to keep an eye on things, decided to leave Philadelphia on the 19th of September, he was held in quarantine at Elizabethtown. 42 Both Attorney General Edmund Randolph, who was away from the city when the pestilence broke out, and Postmaster General Timothy Pickering, who was away on Indian treaty negotiations, took quarters in Germantown upon their return. 43

The machinery of the Federal government was breaking down. Clerks could not be kept at their desks; many remained home rather than risk infection at their offices. From Mount Vernon in mid-October President Washington observed that it seemed futile for him to return

39 Ibid.
40 Carroll, p. 124.
41 Powell, p. 108. "For a while the Secretary's illness was the biggest news story of the capital city."
43 Powell, p. 109.
to the city since almost all Federal offices were still closed.

Oliver Wolcott, comptroller of the Treasury, had removed not only his family but also his office to the Falls of the Schuylkill. As it happened, one treasury clerk, Joshua Dawson, remained at his Philadelphia residence and sent news of the city to Wolcott by courier. The President at Mount Vernon maintained liaison with the Comptroller, who relayed news and messages to those officials whose whereabouts were uncertain. Thus Washington was able to keep himself current on public business.

In the realm of foreign affairs, the President was informed of this regularly by Secretary of State Jefferson, who forwarded letters from the British minister and others together with drafts of answers. The President himself was busy acknowledging letters affirming trust and confidence in the administration, and in writing to the members of his cabinet. As he became increasingly anxious about diplomatic problems, he wrote early in October to Jefferson:

> It appears to me that the public business will require the Executive officers to be together sometime before the meeting

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44 Washington to Jonathan Trumbull, October 13, 1793. Fitzpatrick's *Writings of George Washington*, XXXIII, p. 120.

45 Powell, p. 109.


of Congress, I have written to the Secretaries of the Treasury and War to meet me at Philadelphia or vicinity, say Germantown, by the first of November, and shd. be glad to see you at the same time. The Attorney General is advised of this.  

Washington copied what Secretary Knox had reported of the French fleet and the general activities of Genet. On the 21st of September Knox had written that the French fleet was still in New York, and in "a wretched state of disorganization, which prevents its sailing." But a letter from the Secretary of War on the 1st of October informed the President that the whole French fleet, except the Ambuscade, would "sail tomorrow from New York upon some cruise unknown."  

But the commanding problem of the moment was not foreign, it was internal. Congress was scheduled to meet early in December — but where should it meet? From the Attorney General on September 30 the President first requested a written opinion on whether the meeting place of Congress could be changed:  

Have you ever examined with attention, and with an eye to the case, whether the Constitution, or Laws of the Union, give power to the Executive to change the place of meeting of the Legislature in cases of emergency in the recess? For example, Whether the spreading of the fever which is so fatal in Philadelphia, thereby endangering the lives of the members who might assemble there the first Monday in December next, is a case that would come under any provision in either, If you have not I pray you to do it, and give me the result of your opinion.  

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50 Ibid. Washington quoted the letters from Knox: "Mr. G----t has been low spiritied for ten days past." p. 113.  
51 Ibid.  
Washington had discussed this important matter with Jefferson, who had given him only a "superficial view" of the problem. The Secretary of State felt that the President had no power to decree a change of residence. However, Washington thought, Jefferson had not examined the laws. "The Constitution," he wrote Randolph, "is, I believe, silent respecting it." 54

Expecting to leave for Philadelphia about the 25th of October, Washington asked Randolph to find some convenient lodgings, hired lodgings only, in Germantown if the capital city was still unsafe. 55 When the President received no reply, he complained to Jefferson that it was twelve days since he had written to the Attorney General and no answer had been forthcoming — except a communication regarding the spread of the epidemic, which was now reported to be in Germantown. If this report was true, it involved the Executive in "a serious and delicate situation." 56

There were other cities where Congress could meet, Washington knew, and he enumerated the points in favor and those against such places as Wilmington, Trenton, and Annapolis. The former two were "equidistant in opposite directions from Philadelphia, both on the

53 Ibid.
54 Ibid., p. 109.
55 Ibid.
56 Washington to Jefferson, October 11, 1793, Fitzpatrick's Writings of George Washington, p. 117.
great thoroughfare, equally dangerous on account of the infection being Communicated to them, and would . . . be equally obnoxious to one or other set of members, according to their situations.\textsuperscript{57} Annapolis, on the other hand, would be able to accommodate Congress; but the members might think that the President had "interested and local views" if he selected that city. "What sort of town then is Reading," he asked Jefferson, "and how would it answer?"\textsuperscript{58} Washington wrote to others for an opinion on the matter; to Jonathan Trumbull, to James Madison, to Postmaster General Pickering, and again to the Attorney General.\textsuperscript{59} From each the President requested advice on two points: could Congress lawfully be convened in some place other than Philadelphia, and which place would be suitable if a change were permissible?

In his communication to Oliver Wolcott, Washington enclosed a copy of his letter to Hamilton, "should it have met with mischance."\textsuperscript{60} From Wolcott the President wanted to know what conditions now existed in Philadelphia. What was the true state of affairs? Had the malady really extended to Germantown? The President asked Wolcott for full

\textsuperscript{57} Ibid. The President wished to avoid controversy over the location of a meeting place, even if it was but a temporary expedient.

\textsuperscript{58} Washington to Jefferson, October 11, 1793, Fitzpatrick's Writings of George Washington, XXXIII, p. 117.

\textsuperscript{59} Washington to Jonathan Trumbull, October 13, 1793, pp. 120-121; Washington to Randolph, October 23, 1793, pp. 135-136; Washington to James Madison, October 11, 1793, pp. 122-125; Washington to Pickering, October 14, 1793, pp. 128-129, Fitzpatrick's Writings of George Washington, XXXIII.

\textsuperscript{60} Washington to Wolcott, October 14, 1793, Fitzpatrick's Writings of George Washington, XXXIII, p. 127.
information on "the prevailing sense of those who are best acquainted with the true situations of things in and about Philadelphia." Would Germantown serve as a place for Congress to assemble if the fever had not abated in Philadelphia by the time Congress was due to convene? This would save removing the public offices to a more distant part, Washington thought; but if Germantown was unsafe, where else? All reports that the President had received were vague and contradictory, and Wolcott appeared to be the only one who could give him "precise information on this head." 

That the President was exceedingly discomfited by the question of the meeting of Congress was evident in his letter to James Madison. Previously he had received two sets of opinion, he told Madison, but the laws had not been fully examined at that time; nor was the case at that time "so serious as it is now." The Attorney General had not replied and it was improbable that he would, Washington thought, because very likely Randolph "had no communication with the Post office." Time was pressing and the situation was becoming more acute. To Madison the President related the respective merits of the cities considered as possible meeting places, as he had done in his letter to

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61 Washington to Wolcott, October 14, 1793, Fitzpatrick's Writings of George Washington, XXXIII, p. 127.
62 Ibid.
64 Ibid.
the Secretary of State. "... you can see my embarrassment,"

Washington confided, and he explained it in these terms:

The difficulty of keeping Clerks in the public offices had, in a manner, suspended business before I left Philadelphia; and the heads of Departments having matters of private concernment which required them to be absent, has prevented my return thither longer than I had intended.65

Secretary of State Jefferson had "matters of private discernment" besides the international problems to ponder. Jefferson, wishing to avoid being "committed to anything further"66 in the State Department, had originally planned to leave the capital at a later date and return just before Congress would convene. Official papers, delayed in transmittal due to the general disruption of communications, resulted in considerable deferment of the more pressing issues confronting the State Department. To consider the problems long delayed, Jefferson would now be required to meet with the President before Congress convened.67 The French minister was continuing to embarrass the administration by not delivering vessels seized by the French illegally and even attempted to defend one ship by ordering the French squadron to protect her. "Was there ever an instance," Jefferson asked Madison,

65Ibid., p. 214.
66Jefferson to Madison, September 15, 1793, Ford's Writings of Thomas Jefferson, VI, p. 431. Originally the arrangement had been for the President to be absent from the capital for three weeks, following which the Secretary of State would be away for six weeks, and as Congress would convene at the end of this time, Jefferson hoped to avoid attending "any more councils."
"of a diplomatic man overawing & obstructing the course of the law in a country by an armed force?" British activities on the high seas were also the cause of numerous complaints registered by citizens of the United States. Britain must decide which vessels were to be paid for and set limits where she captured her prizes, Jefferson reported to the President, but he doubted that anything could be done until the President returned to the seat of government, or "to the place where you will fix for the time."  

It was more embarrassing each day to the President to be out of touch with national business. In answer to a complaint from Governor Thomas Sim Lee of Virginia respecting the interpretation of neutrality, Washington expressed regret that he had not received a formal report from the Secretary of War and therefore was unable to render an opinion. He hoped to be at the seat of government by the 1st of November, he told Lee, "as I find cases are occurring daily which call for attention and decision." But, as he wrote to Jefferson, "courts of jurisdiction and protection must lie over till we

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69 Thomas Pinckney to Jefferson, September 25, 1793, State Papers and Publick Documents of the United States, I (2d. Boston: T.S. Wait and Sons, 1718), p. 407. Minister Pinckney at London reported that Britain was still making prizes of their enemy's property, "in whatever vessel it may be found."
70 Jefferson to Washington, October 3, 1793, Ford's Writings of Thomas Jefferson, VI, p. 434.
71 Washington to Thomas Sim Lee, October 13, 1793, Fitzpatrick's Writings of George Washington, XXXIII, pp. 118-119.
72 Ibid.
meet, when I will request you to remind me of it."  

The matter to be settled at once was the selection of a meeting place for Congress; the situation was urgent and not a moment was to be lost in notifying the members of a change in the meeting place. Washington requested that Jefferson "draw up a proper instrument, leaving the place blank, but giving me your opinion thereon."  

Germantown might be the best place, and from there Congress itself could decide further what course of action to take. The latest news from Germantown, however, was not favorable. Nonetheless Washington expected Jefferson to accompany him to that city, and he informed all Department Heads to meet with him there.

Before setting out for Germantown in the last week of October, the President received the written opinions he had requested of his Cabinet officers. Jefferson stood by his opinion, which was bolstered by Madison, that the President had power to call Congress at an earlier day "than to which they stand adjourned," but no power to change the place of meeting. Hamilton felt strongly that the Federal government must operate despite any extraordinary situation at the seat of government. The President, he thought, might designate a different meeting place.

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73 Ibid.
74 Ibid.
75 Ibid.
76 Jefferson to Washington, October 17, 1793, Ford's *Writings of Thomas Jefferson*, VI, p. 436.
place; but he doubted whether the circumstances of a contagious disease existing at the seat of government be a constitutional ground for convening Congress at another place, but at the same time they had premeditated. 77

Randolph and Knox shared Hamilton's view, with Randolph offering a compromise: let the legislators come to the usual meeting place and if that was found unfit, then let them decide where they would meet. 78

Members of the cabinet began arriving at Germantown in the last week of October. Accommodations were scarce, and Washington himself expected to settle for whatever was available. He had informed Randolph that

any kind of lodging and board would suffice for the short stay I shall have to remain there; especially as all the time, not employed in business with the heads of Departments and yourself, might be spent in little excursions to places at a small distance therefrom: of course all idea of furnishing, and keeping a house myself (being entirely unprovided with Servants or means of any sort) ought to be banished entirely, if it be practicable, and some rooms, even in a tavery, (if I could be retired in them) taken in preference. 79

As it happened, Randolph was able to provide lodgings for the President in a private home. 80 But his Cabinet officers were not so comfortably established,

78 Carroll, p. 134.
80 Carroll, p. 104.
Jefferson met the President at Baltimore, and both continued the journey in a hired coach as the public stage ran no farther north than that city. The Secretary of State, who complained of the extremes of heat, cold, dust, and rain on the ride northward — and most of all of the exactions of the "harpies who prey upon travellers" — and found Germantown still full of Philadelphians who were in no hurry to return to the city. He felt himself fortunate in obtaining a bed "in a corner of the public room of a tavern only," because the next choice was "to sleep on the floor in my cloak before the fire." By the 2nd of November Jefferson was sure that "nothing will be done by the President as to the meeting of Congress." At this moment Randolph was staying in Reading and the Secretary of the Treasury was back at his house in Philadelphia. "Hamilton is ill," Jefferson wrote, "& suspicious he has taken the fever again by returning to his house." The matter of the meeting place of Congress was as yet undecided on the 1st of November; but it was supposed that the members, knowing that the President was in Germantown, would rendezvous there. "After settling informally to what place they will remove," Jefferson

81 Jefferson to Thomas Mann Randolph, November 2, 1793, Ford's Writings of Thomas Jefferson, VI, p. 437.
82 Ibid.
83 Ibid.
84 Jefferson to James Madison, November 2, 1793, Ford's Writings of Thomas Jefferson, VI, p. 440.
thought, "they will go into the fields of the city and pass a regular vote." Germantown was so crowded that Jefferson felt it could not "lodge a single person more," and in his opinion the choice of a meeting place lay between New York and Lancaster. The great problem of where to convene Congress required no decision by that last meeting the last week of November as Jefferson reported:

the yellow fever is entirely vanished in Philadelphia, & all the inhabitants returned to it. The President remains here merely to form a point of union for the members of Congress, who may arrive uninformed of the safety of Philadelphia; but nobody doubts that they will immediately go from hence to sit in Philadelphia.

Meanwhile Governor Mifflin was contemplating the next meeting of the Pennsylvania legislature. Government in the State of Pennsylvania had been in a suspended condition since the first week of September. An official of the state treasury reported to the Governor that payments of accounts would be made as soon as the offices were again organized, and that no officials had been paid due to the "present deranged state of the officer's accounts occasioned by the malignant fever." The Governor had asked the Attorney General if that state's...
constitution would permit removal of the assembly to another place. 89

He had also written for an opinion from the physicians attached to the
port of Philadelphia "relative to the safety with which members of the
Legislature may assemble in the City of Philadelphia." 90 The physicians
of the port reported the city safe for the Pennsylvania Legislature to
assemble, but Governor Mifflin was doubtful and formulated an alternate
plan:

The Governor was induced, notwithstanding the said opinion, to
propose that the members should meet as individuals in German-
town on the Saturday preceding . . . where, with all information
that can be collected, they may judge for themselves of the
Expediency of entering the City. 91

Governor Mifflin was determined to have an official report of
what had happened in the city of Philadelphia. To the College of
 Physicians he proposed "the following inquiries relative to the Calamity
which has recently visited the City of Philadelphia:

- Was the disease imported or not? If imported, when, by what
  means, and from what place: if not imported What were the
  probable causes that produced it?
- What measures ought to be pursued to purify the City from any
  latent infection: and what precautions are best calculated to
  guard against the future occurrence of a similar Calamity? 92

To the "Committee for the relief of the Sick and Poor" the Governor
requested answers to the following inquiries:

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89 Pennsylvania Archives, Nov. 1, 1793, p. 674.
90 Ibid., 5 Nov. 1793, p. 683.
91 Ibid., 30 Oct. 1793, p. 669.
At what time and place did the disorder make its appearance and to what quarters of the City did its ravages extend? How many citizens have died since the commencement of the disorder; how many recovered, who had been afflicted with it; and what number of orphans have been deprived of their parents on this? What accommodations and supplies were provided for the poor and Sick: what monies have been disbursed and what debts incurred? What is the amount of the Charitable Contributions for the relief of the Sick and Poor distinguishing the amount of the actual grants and engagements by way of security to the Bank for making loans? What measures are necessary to purify the City from any latent infection and what general precautions ought to be taken to guard against a similar Calamity in the future?

By the latest week of November, the College of Physicians had rendered their report. Three of its members were in dissent, including the estimable Dr. John Redman, president of the College. Doctor Rush was no longer a member of the College, having submitted his resignation earlier that same month. The report of the College covered only two of the questions posed by the Governor:

No instance has ever occurred of the disease called yellow fever, having been generated in this city, or in any other parts of this state as far as we know; but there have been frequent instances of its having been imported, not only into this, but into other parts of North America, and prevailing there a certain period of time; and from the rise, progress, and nature of the malignant fever, which began to prevail here about the beginning of last August, and extended over a great part of the city, we are of the opinion that this disease was imported into Philadelphia, by some of the vessels which arrived in the port after the middle of July. This opinion we are further confirmed in by various accounts we have received from the best authorities.

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93 Ibid.
94 Rush, III, p. 146. "Three members of the College dissented from the report: Dr. John Redman, Dr. Foulke, and Dr. Leib."
we could procure upon the subject. The report did not advise the Governor how to purify the city; nor did it include advice on how to prevent future visitations of the pestilence. Omitted entirely was the probable cause of infection.

Many months later the Mayor's volunteer committees concluded their business at a public meeting, with resolutions of thanks passed. Approximately $34,000 had been received in donations and $37,000 expended. This left the city a deficit of over $3,000, and there were still ninety-three orphans to care for. The expenditures of private citizens, including Stephen Girard, were unknown. Governor Mifflin proclaimed a day of "General Humiliation, Prayer, and Thanksgiving" for Thursday, December 12, 1793, and now appointed Dr. Samuel Duffield as permanent Health Officer of the port of Philadelphia. Doctor Duffield was to present a formal estimate of the cost of maintaining a "health office" in the city.

Philadelphia was quick to recover. As Doctor Rush observed, "it afforded a subject of equal surprise and joy to behold the suddenness with which the city recovered its former habits of business."

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96 College of Physicians, p. 6.
97 Ibid.
98 Powell, p. 274.
99 Pennsylvania Archives, p. 676.
100 Ibid, Dec. 6, 1793, p. 687.
101 Rush, III, p. 137.
Six weeks after the epidemic had passed, Rush said, "nothing but the fresh graves, and the black dress of many of the citizens, afforded a public trace of the distress which had so lately prevailed in the city." The doctor noted, however, that it was easy to distinguish between these citizens who had weathered the siege in Philadelphia and those who had returned from their flight into the country.

Congressman Fisher Ames made some critical observations upon his return to Philadelphia from Boston. The citizens, he said, seemed busy and cheerful with the traces of that "formidable curse" barely visible, the danger of infection was ascertained to be past. But Ames would take care not to neglect "such precautions as prudence may point out." It was doubtful, he thought, that anyone could discover the history of the distemper because the factions among the doctors and the citizens themselves would distort whatever facts might be collected. Ames summarized:

It has been disputed whether the yellow fever was imported or bred here; whether contagious or not; whether curable by tonics, or calomel and bleeding; whether frost and rain put a stop to its ravages; in short, everything that ought to be called fact is disputed, and all that should be modestly confessed to be ignorance, is affirmed.

Politics, Ames thought, had been spirited since Congress convened, and

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102 Ibid.
103 Ibid.
105 Ibid., p. 131.
the President's message seemed tart. On the whole, however, the outlook was brighter. "Our horizons look calm," same Ames, "but who can trust the weather. I hope for the best."  

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\[106\] _Ibid., p. 132._
CHAPTER V

CONCLUSIONS

The summer of 1793 had opened tumultuously in Philadelphia, capital city of the United States. From his window President Washington could observe at first hand the parades of citizens partial to the French cause, and he could read fervent articles in the Philadelphia papers which complained bitterly of apparent favoritism to Britain. The French envoy was active in stirring sentiment favorable to his cause even after his recall had been requested. With the public spirit so aroused and divided, the Federalist administration, avowedly neutral, was finding it more difficult each day to steer clear of entanglement in the European war. Fisher Ames was more prophetic than he knew when he described the political tumult:

We must expect to sleep, if we can, while the ship is rolling, for no calms, except those which are portentous of storms, are to be expected. We may be safe; we must not hope to be quiet.¹

A political quietude which Ames could not foresee came to Philadelphia that August with the outbreak of yellow fever. During the three months that the pestilence held Philadelphia in its grip, all

activity ceased other than the most essential functions of daily living. As the ordinary processes of government and business came to a standstill, people remained in their houses to shut out the epidemic. As it happened, yellow fever nonetheless claimed one-tenth of America's most populous city, and created havoc and despair on every level. Many responsible officials of both state and national government were gone from the stricken city by mid-September, and many lesser officials and clerks in public office found it expedient either to leave the city or remain away from their posts. The mayor of Philadelphia, for example, could count but two of his overseers among those gallant few who remained to see to the needs of the sick and the poor — and those volunteers who responded to the mayor's call constituted the only effective group in the city for several weeks. When the fever came, politics took a holiday.

Philadelphia had not been subject to a major yellow fever epidemic since 1762. It was in population centers such as Philadelphia, New York, and Boston that epidemic disease always took its heaviest toll; each of these cities knew too well the ravages of yellow fever. Of all outbreaks, however, the Philadelphia pestilence of 1793 was the most destructive in American epidemiological history. It marked, as well, the beginning of serious epidemiological thinking and study in the United States.²

Just as plague became the "frightful teacher" of Europe in the fourteenth century, yellow fever in the eighteenth century became the American pedagogue and dominated epidemiological thinking until the advent of bacteriology late in the nineteenth century. But the disease remained an enigma to medical science for more than 100 years. After the outbreak in Philadelphia in 1793, high mortality rates and the inability to effect a cure kept the disease a most perplexing one for the medical profession. And, long after its cause was discovered, yellow fever remained the subject of intense research; its virus served as the basic virus on which much preliminary work, later applied to other viruses, was undertaken.

The issues raised during the Philadelphia epidemic were of vastly greater magnitude than the usual quibbling over medical principles and practices. What should be done about epidemic disease in general and about yellow fever in particular? If the disease was imported -- as the College of Physicians said it was -- then very strict quarantine measures might prevent further occurrences. If the disease was generated in Philadelphia -- as Doctor Rush said it was -- then what measures should be taken to prevent future outbreaks? Was the disease contagious? Rush observed that yellow fever's contagion was a different kind than that associated with measles and smallpox. There was something about the impure air in which it was generated, said


Rush, that provided the exciting cause.

Since the disease was not carried outside the city — nor was the disease contracted at Bush Hill by those caring for the victims brought there from the City — Rush could stress the value of sanitation and point out the fact that yellow fever occurred only in hot and moist climates and seasons. Clean up the city and drain the swamp lands, he advised, to destroy sources of impure exhalations. In the absence of a known biological etiologic agent and without knowledge of the insect vector, this reasoning was sound.

Enlarging upon the controversies of importation against local origin, and contagion against non-contagion, Noah Webster attempted to describe the basic facts of epidemic disease as demonstrated by the Philadelphia outbreak. Webster obtained opinions from Doctors Rush and Currie, and from numerous other physicians throughout the United States, regarding aspects of epidemic disease. These opinions were compiled, together with Webster's analysis of them, in a work which tested the epidemic constitutional theory of disease against the contagion theory. Webster's conclusions contained both the factors of local miasm and contagion: basic conditions of the atmosphere, when reinforced by local miasms and supplemented by infection, caused the terrible manifestations of disease. In part or in entirety, this

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Noah Webster, Collection of Papers on the Subject of Bilious Fevers Prevalent in the United States for a Few Years Past, cited in Supplements to the Bulletin of the History of Medicine, No. 9, with an introduction by Benjamin Spector (Baltimore: Johns Hopkins Press, 1947).
theory was accepted from that time until late into the nineteenth century.

Had any one part of Webster's doctrine been followed to its conclusion, such isolation precautions or sanitary reforms or quarantine measures might have proved important in preventing the spread of epidemic disease. Unfortunately, however, there was lack of agreement on any one principle. Quarantine regulations, for instance, disrupted shipping and hurt commerce; the disease could always be conveniently designated as non-contagious in the absence of proof to the contrary. Health boards were composed of laymen, political appointees for the most part, who were confused by the disagreement over the actual cause of the epidemics. Such quarantine regulations as were promulgated were difficult to enforce and fell quickly into disuse. Sanitary reform — in such matters as polluted water, inadequate sewage disposal, and gross carelessness in general — had to await a later date when the public consciousness was sufficiently aroused.

Responsibility for the public welfare was recognized early in Philadelphia's history, but the yellow fever epidemic of 1793 proved that the resources which existed were totally inadequate to cope with the multitude of problems caused by the visitation. The hospital and the almshouse, maintained for the care of the sick and the indigent, contributed only minimal assistance during the pestilence. Since infectious cases were not permitted in the hospital, accommodations had to be found elsewhere for those unable to be cared for in their own homes. With officials in flight or themselves victims of the
pestilence, Mayor Clarkson had to carry on alone. It was Clarkson and his volunteers, notably Stephen Girard, whose manifestations of the greatest humanitarian spirit saved Philadelphia from what might have been utter desolation. Doctor Rush was among the several physicians who chose to see the city through its dark hour rather than to flee from the disaster, as many of his colleagues did. Whether his remedy was in error or not, Benjamin Rush exemplified the devoted and unselfish physician who imparted courage and confidence during the most terrifying days of the epidemic.

In addition to all else, the pestilence of 1793 proved to be very costly to Philadelphia in dollars and cents. The economic loss was reckoned in the millions. Following the epidemic, the city did install a waterworks and adopted some measures of good municipal housekeeping. The closed system of water storage did reduce the number of mosquito breeding places, and cleaner streets soon won for a city a name for neatness and orderliness. But its reputation for yellow fever persisted. The State of Pennsylvania moved its capital to Lancaster in 1799; and in 1800, when the national capital removed to its permanent location as provided by law, Philadelphia lost her status as the foremost city of the nation. Commerce gravitated to New York and the port of Philadelphia became a secondary one. Never again did Philadelphia regain the proud pre-eminence in political and economic affairs that she held in 1793.

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6 Dunaway, p. 343, History of Pennsylvania.
Epidemic disease, which had often disrupted the affairs of American cities in the eighteenth century, created a hazard of national significance when it struck the capital city in late summer of 1793. Perhaps this one epidemic has received greater publicity than others by reason of the serious threats to national affairs and international relations which existed at the time. For whatever reason, intense controversy among the doctors raised the issue of epidemic disease to more serious consideration by laymen and physicians alike. Epidemiologically, the pestilence has been given the highest importance in promoting more serious study and research into the whole matter of contagious disease. Whether the Philadelphia pestilence, occurring when it did, relieved the nation of a major conflict from within or without is a matter of conjecture. Vice-President John Adams, writing a score of years afterward, declared that "nothing but the yellow fever . . . could have saved the United States from a total revolution of government."  

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7Adams to Jefferson, June 13, 1813, cited in Carroll, p. 56.
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