In the fall of 1865, Americans could for the first time in five years look forward to a peaceful new year. The Civil War had ended; the union had been preserved. Yet the nation which emerged after four years of war seemed to many Americans sadly altered. No longer was the United States immune to the vice and hardship of the Old World. Nowhere did the departure from older standards seem more apparent than in the cities. The inhabitants of the city's tenements were ignorant of traditional American ways, ignorant in many cases even of English. Still more alarming to pious Americans was their seeming lack of acquaintance with the simplest principles of religion and morality. Crowded slums were, moreover, the source of physical as well as spiritual danger. This conviction, though hardly novel, was becoming increasingly meaningful. Typhoid, dysentery, pneumonia, and tuberculosis were normal hazards of tenement life. In epidemic years, disease claimed an even more disproportionate number of victims from among the city poor.

And 1866 promised to be such a year, for cholera had again swept through Europe. England, France, and Germany had each suffered severely in the summer of 1865; and mere good fortune had kept the disease from American ports in the chaotic months following Appomattox. Having been spared until the fall, Americans could rely upon the cold of winter
for protection. Few doubted, however, that another spring
and summer could pass without cholera having visited North
America.
Yet it need not take its accustomed toll. Science had, in the
years since 1849, shown how cholera might be prevented; it
was the duty of thoughtful Americans to see that it was. The
injunctions of medicine had in the few months before spring to
be embodied in statutory law.

The Civil War had intensified, not arrested, America’s mate-
rial progress. The signs were everywhere. Equally apparent to
moralists were the spiritual dangers of such rapid progress.1
Wealth seemed to have become the sole standard of success.
Breeding, intelligence, education counted as nothing against its
possession.2 The “reconstruction now most urgently demand-
ed,” one editor concluded, “is that of conscience and of law
throughout the country.” Though the premonitory signs were
visible to the moralists many years before, the Civil War
seemed to mark a period in America’s spiritual life; pious and
respectable Americans could not help but express their dismay.
The blood of the people is pulsing quite too fast for health and
safety. We are drifting sadly, terribly away from the old land-
marks and from every beacon of sense and security. What mad-
ness has seized upon the people? How far are these things to carry
us?

Although materialism and immorality could be found in the
most remote hamlet, it was in great cities that such poisonous
growths flourished most luxuriantly. No moralist doubted this
observation. New York alone supported thirteen theaters and

1 Not that the Bible frowned on enterprise. On the contrary, it favored
“true progress.” But such progress was steady and comparatively slow, “not
the flush of fever, the madness of speculation.” Pioneer (St. Paul, Minn.),
August 17, 1866.
2 See, for example, Methodist (New York), VII (April 28, 1866), 132, and
the Hebrew Leader (New York), January 26, 1866, for two very similar
jeremiads from two very different sources.

3 Round Table, III (June 2, 1866), 344.
some two thousand houses of ill fame. So debased an environ-
ment offered constant temptation to all but the strongest in
faith. The most innocent living in the city's tenements were
forced unavoidably into intimate contact with the most de-
praved.

The population which teems and ferments from cellar to garret
into huge tenement houses has been for years absorbing a large
proportion of the former middle-class of society, subjecting them
to all the lamentable evils which surround such homes... In the
tenement house, the virtuous but unfortunate seamstress finds her-
self on the same floor with lewd women; the honest, but poor
mechanic, is in the next room to the burglar on one side and the
typhus fever case on the other.4

Public-spirited clergymen naturally mentioned the burglar
and the typhus case in the same breath, for the physical evils of
tenement life were becoming as real to this generation of
Americans as its moral hazards had been to their parents. Just
as the Young Men's Christian Association was a response to the
moral pitfalls of the city, so the public health movement was
the result of a growing consciousness of the physical dangers
of city life. The increasing use of mortality statistics provided
new support for a traditional faith in the healthfulness of rural,
as opposed to urban, life.5

4 Christian Intelligencer (New York), February 1, 1866. The image of a
population "teeming and fermenting" is particularly significant, illustrating
at once the pervasiveness of scientific ideas and the feeling of distance and
inhumanity with which the middle classes regarded the slum dwellers.
Equally significant is the expression of fear that the middle class was being
proletarianized.

5 Probably the most widely read of the early uses of comparative mortality
statistics in the English-speaking world was that by C. Turner Thackrah, a
Leeds surgeon, in his pioneering study of health conditions in his native
city, The Effects of Arts, Trades, and Professions, and of Civic States and
Habits, on Health and Longevity... (2nd ed.; London, 1852). The most in-
fuential of such early American statistical studies was that by Lemuel Shatt-
tuck in the famous Massachusetts Sanitary Commission Report that ordinarily
bears his name, Report of the Sanitary Commission of Massachusetts (Bos-
ton, 1851), pp. 82-83. This has been conveniently reprinted in facsimile with
a foreword by C. E. A. Window (Cambridge, 1948). The Thackrah study
has been reprinted as well, with a foreword by Alexander Meiklejohn (Edin-
burgh, 1957).
Perhaps the aspect of city life most alarming to mid-nineteenth-century Americans was the increasing gulf which it fostered between rich and poor. In this growing estrangement lay a threat not only to the bodies and souls of individuals, but to the stability of American society. The old bonds of common tradition, origin, and religion seemed to be disappearing. With these ties gone, there was little to protect America from the class hostility and class warfare that convulsed the Old World. New York already rivaled Paris and London in the extremes of splendor and squalor that it harbored.

A thorough grounding in the teachings of religion and morality was the most important requirement in the preparation of a citizen for participation in a democracy. Few Americans would even have thought to question this belief in 1866. Unfortunately, the city poor seemed almost completely alienated from religion and its teachings. The evangelical churches had in the cities become rich men's churches, churchgoing a practice limited to those who could afford pew rent and fine clothing.7 Where the poor were not completely neglected,

6 New York State Metropolitan Board of Health, Annual Report . . . 1866 (New York, 1867), p. 11.
7 How a hard-working mechanic was quoted as remarking, "can I afford to be a Christian and hire a pew and dress up my family in such a style on Sunday that they won't be snubbed for their shabby appearance by genteel Christians?" Boston Investigator, XXXV (May 23, 1866), 10. Though the Boston Investigator was an anticlerical publication, it said nothing that was not corroborated in the laments of the orthodox. Cf. "A Layman," Zion's Herald (Boston), July 15, 1866. The "official" content of American morality and social attitudes was, on the whole, set by the assumptions of these "evangelical churches" (or "orthodox" churches, as religious liberals were more likely to call them). The alienation of the city poor from these values meant—to the members of these churches—their alienation from that which was distinctly American.
wrote a Chicago Presbyterian, they were favored with a variety of attention so condescending that its acceptance humiliated its recipients and merely intensified their hostility to organized religion.  

The poor had, in the eyes of pious Americans, become a class without religion. And without it, they were, like the lower classes in European cities, outside society. This lack of piety among the urban poor helped to confirm the widely held assumption that poverty was no accidental condition. If, as critics protested, the Protestant churches had segregated themselves from the masses, it was solely "by virtue of the habits which religion inculcates and cherishes." On the other hand, the exclusive pretensions of the well to do toward piety as well as respectability resulted, naturally enough, in the poor regarding religion with some of the same hostility they did the man of wealth.

The difficulties of bringing religion to the city poor were discouraging even to the most optimistic. In New York, for example, there were some two hundred thousand children between the ages of five and fifteen; and of these, one hundred and twenty-five thousand were estimated to be "unreached and uncared for, as far as moral and religious training is concerned. . . . heathens in the midst of a Christian city." Even the most careful rural upbringing might not be proof against the city's blandishments. Few youths maintained church ties after moving to the city to make their fortune, and opportunities for sin were everywhere. As Bishop Simpson of the Methodist Church remarked in an appeal for funds to establish a mission

8 North-Western Presbyterian (Chicago), April 28, 1866. In a smaller community, it was argued, the rich and the poor, the refined and the uneducated were all needed to make up a congregation. In great cities, however, the wealthy and cultivated were numerous enough to form their own churches, and thus deprive their less fortunate brethren of financial and moral support.

9 Christian Advocate (New York), February 8, 1866. "This tendency of things," the clerical editor continued significantly, "is natural and universal, and its results unavoidable; perhaps, we might add, also, not undesirable."  

10 Advocate and Guardian, XXXII (January 16, 1866), 20-11.
in New York, there were as many grogshops as there were Methodists in the city. (Ten thousand to be exact.) The only religion that flourished in the slums of the great cities was one as alien as the sentiment dwelt on by

"The poor had been left alone exclusively to the Church of Rome. In the words of one Catholic spokesman, "the poor are emphatically here, as they have never been anywhere else." There were few Protestant churches, he continued, in the lower part of Manhattan Island, though the less congested—and more prosperous—upper wards were well supplied. Those of the poor and uneducated not guided by the teachings of the Catholic church were, he observed, supremely indifferent to everything but the highest of material considerations. The situation was little better among Protestants of wealth and education, he concluded, for few adhered with piety or consistency to any particular discipline.

Judging by the general tone of dismay among Protestant spokesmen, there was much truth in these strictures. Religion, as an Episcopal churchman put it, was being left more and more "to the women and children, and too generally the female children at that." The businessman's contribution to his church was becoming exclusively a monetary one.

The Protestant churches had money enough; perhaps too much, evangelical ministers reflected. History demonstrated that the church had been richest spiritually when poorest in material things. As the hostile New York Herald (January 9, 1866) acutely commented, piety could hardly be expected to flourish where the gospel was preached from "richly velveted
pulpits of royal edifices.” While the benevolent spent vast sums in evangelizing pagan to distant lands, the poor in every American city lived without the word of God.14

Even the Methodists, traditionally the church of the mechanic and artisan, boasted few communicants among tenement dwellers. Had the descendents of Wesley labored in their duty of ministering to the lower classes? Not at all, replied a Methodist clergyman; the Church had never labored with such classes. Until the past quarter-century, America had never harbored a population as ignorant and debased as that which crowded New York and Boston tenements in 1866. “They are foreigners, and such a mass even as the earlier Wesleyans did not operate upon. They are deeper down and more difficult of access than the miners of Cornwall.”15

None of the nation’s great cities could call themselves truly American.16 How could they be, when so large a portion of their inhabitants was foreign—and not only foreign, but the least desirable among those Europeans emigrating to this country? Immigrants of means and enterprise left the city behind them, pushed on into the interior, and through their exertions, added to the nation’s wealth. The “paupers and idlers, vagabonds, and dangerous characters” among the arriving immigrants, on the other hand, “quarter[d] themselves in the tenements to increase the taxation and crime of the city.”17 Could a democracy based upon such a citizenry long survive?

The Irish especially could not expect to function as constructive members of a democratic state. To most Ameri-

14 See, for example, the representative discussion by the Rev. Charles Woodworth, “Popular Evangelization,” Battle Hymn, VI (1865): 47-96, pp. 488 sq.
15 J. Milly, Christian Advocate (New York), April 12, 1866.
16 New York was already regarded as particularly squalid; in the words of one editor of the New York, “with its essentially un-American character and corrupt politics, with its vast population, its wealth and its influence upon the whole country, is a terror to all friends of good morals and wholesome legislation.” American Presbyterian (Philadelphia), May 14, 1866.
17 Christian Intelligencer (New York), February 7, 1866.
cans, they seemed without question to be "politically, one or two stages behind the whole of the Western world." In terror of their priests and still adhering to the traditions of clan life, the Irish voted docilely at the order of some political chieftain. Few American Protestants harbored any affection for the Church of Rome. And "of all Romanists, the Irish were the most bigoted, supercilious, intolerant, and submissive."

The plenary council that convened in Baltimore in 1866 dramatized by its meeting, the traditionally assumed dangers of papal subversion. The year 1866 also marked the height of Fenian agitation for an Irish invasion of Canada. This might be tolerated with the whimsy befitting a quixotic crusade of coastmen and housemaids; not so easily dismissed, especially by northern Republicans, was the part taken by Irishmen in the draft riots of 1863 and, in the spring of 1866, in the Memphis race riots.

The Irish seemed to many Americans a misfortune. But this was not true of all immigrants. Americans had little but praise for the Germans and Scandinavians filling up America's still largely empty Northwest. Not only were they needed, they were thrifty, hard-working, churchgoing—in a word, Ameri-
cans, even if they spoke no English. Few Americans doubted that these industrious folk would be quickly assimilated. "The Teutonic element we may welcome as not only the most intimately akin to our own Anglo-Saxon blood, but most capable of all foreign elements of a quick assimilation, physical as well as mental and social with our native race." The almost unanimous support given the union cause by newly arrived Germans had shown that, unlike the Irish, the ideals of liberty were theirs already. Though individual immigrants might be unsuitable, immigration was, in sum, an asset to the nation. There was a whole continent still to be settled. America offered, in the words of Gordon Bennett's Herald (May 6, 1866), "room enough and to spare for all Europe here." More important than the unwise thesis that the immigrant might bring with him were the years of labor which he contributed to his adopted country. The immigrant was an indispensable element in the nation's expansion.

Though perhaps necessary to America's growing industries, the immigrant and his family represented at the same time an increasing problem to the nation's cities. Even if all were constantly employed, all well fed and clothed, there was simply no decent housing available for them--and little immediate prospect of any. The medical profession added its voice to that of moralists in demanding reforms for the annual sacrifices claimed.

39 A Kansas editor, for example, represented a common opinion among midwesterners when he penned a rhapsodic welcome to his fifteen thousand Norwegian expected to arrive that year on the plains. "There are a hardy, energetic and industrious race, skilled in agriculture and the mechanic arts and too valuable to labor for a wet foot. They are all importers, producer, and saler to the productive wealth of the Country." Freyman's Champion (Archives), June 7, 1866. The same attitude, however, did not the German as indelibly.

32 Methodist (New York), VI (December 16, 1865), 966. It is unnecessary to dwell upon the significance of the deterministic proposition that social behavior was the result of racial--that is, biological--factors. Once formulated, it could easily underlie arguments for stringent exclusion as American conditions declined and the character of immigrants changed.

The historian's commentary over the extent to which Germans actually supported the Union is the subject here. What is relevant is that Americans at the time thought their support almost unanimous.
by typhoid and tuberculosis were the consequence of remedi-able faults in housing and sanitation. The epidemics, moreover, which originated and gained momentum in the crowded slums, spread eventually to cleaner and less crowded areas; the problem of the tenements concerned every city dweller. A solution had to be provided if either the bodies or souls of the city's poor were to be saved.

New York had been crowded in 1849. The city had grown in the seventeen years since then, not only in area, but in depth and height as well. "A new town," in the words of George Templeton Strong, "has been built on top of the old one, and another excavated under it." 24 The dangers of this cramped and unnatural existence were undeniable. In 1865, for example, the death rate in New York's notorious sixth ward—site of the Five Points—was almost three times as great as that of the city as a whole. 25 In 1865, 501,327 people lived in New York's 15,357 tenements. The insanitary and crowded condition of many of these buildings made periodic outbreaks of typhoid, dysentery, and typhus inevitable. In one house on First Avenue, for example, forty-five of ninety tenants had contracted typhoid or enteric fever during 1865, and of these, eighteen had died. These figures no longer surprised the investigating police surgeon once he had seen the building. It was five stories in height, with a twenty-five-foot front and a depth of forty-five feet. The privies were less than six feet from the house, not connected with a sewer, and in the "worst


25 Dr. A. N. Bell, "The Economy of Human Life," Bulletin of the New York Academy of Medicine, III (1867), 219. The death rate was one in twenty-four in the Sixth Ward, while in the Fifteenth Ward, for example, it was one in sixty.
possible condition." Unfortunately, such conditions were neither typical nor limited to New York. In Cincinnati, for example, a Board of Health inspection reported a two-story house containing one hundred and two persons, for whom only one privy was provided. America could expect little mercy should cholera be imported in 1866.

The "Aconita," an English mail steamer, sailed for New York from London on the ninth of October, 1866. She docked at Havre on the eleventh, and took aboard twenty-four cabin and five hundred and forty second-class passengers. When she dropped anchor in New York's lower bay, her master reported sixty cases of cholera and fourteen deaths.

It might have been 1849. Ships had increased in size, their passenger lists had doubled, yet no quarantine had been provided. Both medical and political considerations, however, demanded that the passengers of the "Aconita" be quarantined. A hospital ship was hastily fitted out, and as soon as weather permitted, the passengers from the infected steamer were transferred to it. Though new cases occurred aboard the hospital ship, a latter December discouraged the disease from spreading to the mainland. New York was safe for the moment. But it was clear that this was only a respite—for the rest of the nation, as well as for New York.

Quarantines had never succeeded in containing cholera. Only an effective and thoroughgoing sanitary reform could, it

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185 Evening Post (New York), January 7, 1867. A later inquiry concluded that even when deaths had been manifest, they revealed in many cases "simply of surface purges, by which honor ships, not inadequately mixed with Harve, and even facial tissues, were considered across the intestines and into the rectum. In addition, piers were after "bare stools, hidden from the upper stories to the cellar, and provided with an opening and set on each floor, but with no provision for wsors..." New York State Metropolitan Board of Health, Annual Report... 1866 (New York, 1867), appendix, p. 8.

186 Emigrant (Cincinnati), April 15, 1866.

187 John Seward, "The Cholera as It Appeared at the Port of New York in 1866," Medical and Surgical Register, XIV 1867, 1128. Forty-two thousand cases of cholera were to occur on the hospital ship.
seemed, guarantee relative immunity. New Yorkers were quick to point out, however, that the legal custodians of the city's health had neither the training, the powers, nor most important, the inclination to accomplish such a reform. Fortunately, winter's cold provided an opportunity, albeit a fleeting one, to enact the necessary public health program into law. Even without the threat of cholera, however, such legislation was inevitable.

Existing arrangements were intolerable. The city did have a health board to be sure. But it was, the Republican New York Times (November 10, 1865) acidly commented, "a Health Board composed of such desperate men, that even now with the cholera knocking at our doors... a Democratic Mayor of New York now doubtless considers the cholera the less of two evils, and lets the Board alone." This had been the case for years and concerned New Yorkers had for years been defeated in their attempts at reform. For a decade before 1866, efforts had been made to overhaul the city's antiquated system of public health administration; the Evening Post had, at one point, even appealed to Lincoln's Sanitary Commission to undertake the work. Perhaps this was a desperate expedient, but five proposed health bills had already failed in the state legislature.

Despite these setbacks, advocates of public health reform felt a new confidence in the winter of 1865-66. It seemed more than probable that the state legislature would, during this winter session, finally pass a measure to preserve the city's health. The threat of cholera was, of course, the most potent and immediate factor favoring the bill's passage. Equally important was the almost unanimous support offered by respectable New Yorkers; it was a measure which no friend of humanity could fail to endorse.

Even without the threat of cholera, the proposed health bill might well have been enacted. For perceptive New Yorkers

20 Nevin and Thomas (eds.), op. cit., IV, 44, November 5, 1866.
saw with increasing clarity the danger of failing to improve the conditions of tenement life—and not only in the area of public health. Even the most obtuse could not have ignored a symptom of discord as striking as the Draft Riots of 1863. Slum life bred riots as it did disease, and though Americans might differ as to the means of treating the underlying conditions which produced social and physical disease, none could, with good conscience, oppose the principle of sanitary reform. It was hardly surprising that New York’s Citizens’ Association (an informal group of respectable—and predominantly Republican—Gothamites organized early in the 1860s to promote “honest government”) should sponsor a subsidiary Council of Hygiene and Public Health.

A group of New York physicians inspired by the achievement of European sanitarians and appalled by the waste of life in New York’s slums determined in 1864 to conduct a sanitary survey of the city. They presented their preliminary results to the Citizens’ Association, which then agreed to underwrite a more thoroughgoing survey of the city’s sanitary condition. To carry out the survey, the association created the aforementioned Council of Hygiene. With the help of a number of interested physicians, the members of the council immediately set to work. Throughout the summer of 1864, these public-spirited medical men thoroughly explored the twenty-nine sections into which they had divided the city.

Their findings were uniformly discouraging. The nauseating conditions described by Elisha Harris, the author of

28 It must be noted, however, that the public health reformers did not explicitly connect their endeavors with the traumatic effect of the Draft Riots.

29 The council’s membership included such prominent sanitarians as Elisha Harris, William Parker, Stephen Smith and Alonzo Clark. For other accounts of the passage of the Metropolitan Board of Health Act, see Roy Lubove, op. cit., pp. 1–73, and Stephen Smith, The City That War (New York, 1917), pp. 41–81. The achievements of Lincoln’s Sanitary Commission during the recently concluded Civil War also provided inspiration, and medical officers trained in sanitary matters during the war often returned to lead local health reform movements.
council’s final report, crystallized the already alarmed sentiments of thoughtful New Yorkers. Only a complete overhauling of the city’s sanitary arrangements would, it seemed, be sufficient to protect the people’s health. With the publication of Dr. Harris’ report, it had become almost impossible for Tammany Hall to defend rationally the existing state of affairs.

While the Council of Hygiene had been at work inspecting the city’s sanitary condition, another creation of the Citizens’ Association, its Council on Law, had been occupied in drafting a model public health act. Though a number of New York’s most prominent lawyers served on the council, the proposed board of health bill was drafted by Dorman B. Eaton, a public-spirited young lawyer active for almost a decade in public health reform. The detailed provisions of his carefully worded statute reflected clearly the influence of European discoveries and achievements in the new science of public health. It was his implacably detailed measure that had been introduced and defeated in the state legislature in the spring of 1865. Its unobtrusive shelving could not be repeated in the winter of 1865-66; cholera and the Citizens’ Association report had made the proposed health bill a major political issue at Albany’s winter session.

Proponents of sanitary reform realized that success could come only in the state legislature. New York’s City Council could not be expected to discard a system that provided jobs and contracts for the political faithful. The Republicans, moreover, controlled state politics and the Republican minority in New York City—in many cases, the same respectable folk who were the natural supporters of public health reform—saw in this situation an opportunity of stripping Tammany Hall of valuable patronage. And supporters of the health reform bill could, with some justice, argue that all of the city’s most valuable institutions, the Metropolitan Police and Fire Depart-
circles for a decade and were widely accepted by American physicians. The New York Academy of Medicine, for example, resolved unanimously:

That in the judgment of the Academy the medical profession throughout this country should, for all practical purposes, act and advise in accordance with the hypothesis (or the fact) that the cholera diarrhoea and “rice-water discharges” of cholera patients, are capable in connection with well-known localizing conditions, of propagating the cholera poison; and that rigidly enforced precautions should be taken in every case of cholera to permanently disinfect or destroy those ejected fluids.6

By 1866, there were few intelligent physicians who doubted that cholera was portable and transmissible.

The rapid assimilation of these ideas should not be surprising. Many American physicians were readers of European medical journals. A greater number kept abreast through the “eclectic” sections of the better American medical journals.7 (These consisted of summaries of the more important articles in the major French, English, and by the time of the Civil War, German medical journals.) The ideas of Snow, Budd, and Pettenkofer

6 The resolution is printed in full in the Medical and Surgical Reporter, XV (1866), 54. The clause referring to “well-known localizing conditions,” was obviously a necessity if a unanimous vote was to be recorded.

In a sampling of the opinions of one hundred and twenty-eight physicians—not including the vote mentioned above—fifty-five were found to have taken a thoroughly “contagionist” stand, while twenty-one could be considered contagion-contagionists. Fifty-two continued intransigent anticontagionists. Forty-five of the sample accepted a least some of the conclusions of Snow and Pettenkofer, while twenty-two were believers in some variation of the germ theory. It should be noted that Pettenkofer was considered a contagionist by contemporaries, though historians have often classified him as an anticontagionist because of his outspoken opposition to some of the earlier and more extreme statements of the bacterial theory of disease causation.

7 John Shaw Billings, for example, noted in 1875 that so excellent were the “abstracts and notices of foreign works (In the American Journal of the Medical Sciences), that from this file alone, were all other productions of the press for the last fifty years destroyed, it would be possible to reproduce the great majority of the real contributions of the world to medical science during that period.” A Century of American Medicine, 1776-1876 (Philadelphia, 1876), p. 355.
ments, Central Park, and the Croton Water System, had seen the light of day in Albany. It was absurd, they charged, for Democratic leaders to state—as they did—that the state legislature had neither the competence nor the experience necessary to legislate for New York City.

It was equally absurd, proponents of the bill claimed, to argue as their opponents did that the city's affairs were of no concern to the rest of the state. The protection of New York City's health was the concern of every New Yorker, indeed of every American. For cholera in New York City meant cholera in Albany and Buffalo, on the St. Lawrence, and inevitably throughout the Great Lakes and Mississippi Valley. To leave unchanged the sanitary condition of the great port would constitute criminal neglect. The metropolis must, advocates of public health reform charged, be forced to observe those scientific principles which alone could "prevent it from becoming a common nuisance in the social organization." New York had neither the moral nor the legal right to declare its independence of the rest of the state. The bill must pass—and pass before spring. Should it fail, New York City would "literally be left to its own destruction." And though the poor might suffer first, they would not suffer alone.

Not the poor and the vicious classes alone will fall victims to the coming pestilence, for if the great Cholera-fields that now invite the epidemic in our city be not cleansed . . . the poisons which they will breed will infect and kill many persons among the more favored class.

A properly constituted health board would not only guard against cholera in 1866, but would lengthen and improve the

33 Democratic editorialists naturally appealed to the traditional antagonism of New York workers toward upstate Republicans, whom they characterized as pious and officious hypocrites.
34 Albany Evening Journal, January 18, 1866.
35 Harper's Weekly, X (January 10, 1866), 35. Similar editorial warnings appeared regularly in New York City throughout January and February in most Republican papers.
life of New Yorkers every year. The experience of Paris and London in Europe, and of Providence and Philadelphia in this country, had demonstrated the benefits of public health reform.

A proper board of health should consist not of political appointees, sponsors of the bill affirmed, but of medical men trained especially for public health work. The best medical talent in France and England served on the London and Paris health boards. "A merchant or a lawyer would be as much out of place, in such a sphere of duties, as would a doctor in the counting room or at the bar." It was as rational, the Nation argued, to give one's watch to repair to a blacksmith as to allow politicians to be the guardians of the public health.30

The political as well as the physical health of the community would benefit; every job removed from the purview of politicians made the community a healthier one. Efficiency and professionalism must ultimately replace opportunism and "placecmanship." The public health bill was a reform in the "right direction," as the Evening Post put it, "towards economy and the concentration of necessary authority in the hands of competent persons."31 Especially after the arrival of the "Atalanta," the pressure for the bill's passage became almost irresistible. The Union League Club, for instance, appointed

31 January 26, 1866. The rhetorical stance assumed by the proponents of the Metropolitan Health Bill was similar to that of the civil service reformers and liberal Republicans. Indeed, many of the leaders in the fight for the health bill, such as Dorman B. Eaton, were also active in the civil service cause. Both civil service and public health reform would attract the same sort of "middle-class" support; at least in New York, the poor were appealed to by neither the moral nor the intellectual arguments for either cause.

Particularly embarrassing, however, to the Republican supporters of the bill was the two-month delay in its passage while the two Republican factions that controlled the state legislature disputed its provisions. The Senate, which was controlled by the "Thurlow Weed interest" insisted on having the power of appointing the members of the board, while the partisans of Governor Fenton (who controlled the House) insisted on their version of the bill— one which gave the power of appointment to the governor. See Herald (New York), January 8, 1866; Standard (Brooklyn), February 17, 1866; and the comments of the "official" Tammany paper, the Leader (New York), January 1, February 5, 10, 1866.
a special committee to appear before the legislature and urge its immediate enactment.  

On February 26, the bill finally became law. Titled "An Act To Create a Metropolitan Sanitary District and Board of Health Therein," it ran to some thirty closely printed pages, stating in detail the duties and prerogatives of the board. The Metropolitan Sanitary District embraced New York, Kings, Richmond, Westchester, and parts of Queens counties, while the board created to oversee its sanitary condition consisted of a president (to be appointed by the mayor), four police commissioners, the health officer of the port, and four physicians. Most important, and surprising even to the board's warmest supporters, were the sweeping powers granted it. They would be needed. New York's streets were almost impassible with a mixture of snow, ice, dirt, and garbage. The more despairing of observers reported that the city had never been filthier. Cholera could be expected to show little mercy to a community that harbored such filth—and in which pigs still helped to clean the streets.  

The meeting at which the committee was appointed was held January 18. Evening Post (New York), January 29, 1866. Included in the group were such prominent New Yorkers as William M. Evarts, J. W. Beckman, Rev. Henry Bellows, and Joseph B. Varnum.  

The board was empowered to both create and administer ordinances relating to the preservation of the public health. The bill itself occupied pages 114-44 in New York State, Laws of the State of New York, passed at the Eighty-Ninth Session of the Legislature . . . (Albany, 1866), I, chap. 74. The very length and detail of the act are themselves significant, a measure of the amount of medical and administrative knowledge accumulated in the thirty years since 1832.
XI. THE METROPOLITAN BOARD OF HEALTH

The new health board faced a staggering task. Between the twenty-sixth of February and the first warm days of spring the accumulated filth of years had to be removed, a city of almost a million thoroughly surveyed and cleansed. And the organization with which to accomplish these herculean labors existed only on paper.

Yet the situation seemed far from hopeless. Never had New York City possessed so powerful a Board of Health; never had physicians and disinterested citizens enlisted in such numbers to help in preserving the community's health. Perhaps most encouraging was the medical profession's new found confidence. “Exact methods of investigation” used during the epidemics of 1849 and 1854 had shown that the poison causing cholera was propagated in “the diarrhoeal and vomited fluids of infected persons.” Were this theory sound, the spread of cholera could readily be checked.

And it was, for cholera in New York was limited to a comparative handful of cases. The argument for reform in public health could not have been stated more effectively. The or-

1 New York State Metropolitan Board of Health, Annual Report . . . 1866 (New York, 1867), p. 204 (appendix).

2 It is, of course, doubtful that the mildness of New York's cholera epidemic was due entirely, or perhaps even partially, to the efforts of the Metropolitan Board. The historian, however, must deal with the felt reality of the time, and the fact was that Americans credited the board with having saved the city.
ganization and achievements of the Metropolitan Board exerted a lasting influence; in the history of public health in the United States, there is no date more important than 1866, no event more significant than the organization of the Metropolitan Board of Health. For the first time, an American community had successfully organized itself to conquer an epidemic. The tools and concepts of an urban industrial society were beginning to be used in solving this new society’s problems.

In the summer of 1849, Dr. John Snow, a prominent London anesthetist, published a brief pamphlet, *On the Mode of Communication of Cholera*. Dr. Snow argued that cholera was a contagious disease caused by a poison reproducing itself in the bodies of its victims. This poison was to be found in the excreta and vomitus of cholera patients and, according to Snow, it was these substances that spread the disease, most frequently through a contaminated water supply.

Snow’s pamphlet caused no immediate stir. His was one among dozens of hopeful theories published at the time. Anyone could, and many did, compose a fanciful etiology of cholera; the problem was to prove it. Snow, unlike the others, did.

When in 1854, London was again severely visited with cholera, Dr. Snow was prepared to test his theory. Fortunately for his plans, if unfortunately for many Londoners, the city was served by two different water companies, the Lambeth and the Southwark and Vauxhall. By a painstaking correlation of the comparative incidence of cholera in subscribers to the two water companies, Snow was able to show that cholera occurred far more frequently among the users of one company’s water. This company, the Southwark and Vauxhall, drew its water from the lower Thames, after it had been contaminated with London sewage, while the Lambeth water was...
drawn from the Thames above London. How, Snow asked, could such striking data be explained without assuming that cholera was spread by contaminated water? His results were published in 1855 and soon began to win converts.

The most influential of such converts was the great Munich sanitarian, Max von Pettenkofer. The Bavarian scientist had also been able to demonstrate a connection between water and the spread of cholera. Pettenkofer, however, formulated a theory somewhat at variance with that of Snow. He believed that the excreta of cholera patients was not immediately contagious, but had somehow to develop or "ferment" before it was capable of spreading the disease. This fermentation took place, according to Pettenkofer, in the water in the soil. Thus the prevalence of cholera—and typhoid as well—was dependent upon the level of the ground water in any given locality. Despite this somewhat arbitrary aspect of Pettenkofer's formulation, his was a powerful voice added to that of Snow in warning of the dangers of a contaminated water supply. One might disagree with these ideas, but they could not easily be ignored; if Snow and Pettenkofer were correct, cholera could be easily prevented. (One need only disinfect immediately the bedding, clothing, and excreta of those suffering from the disease.)

When in the spring of 1866, the United States was again threatened by cholera, these ideas had been current in medical

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*Both companies distributed their water generally throughout London; the only variable seemed to be the source from which they drew their supply. More striking than the work I have outlined was the so-called Broad Street pump incident. Snow traced a localized outbreak of cholera to a pump in Broad Street and seemed to have abruptly checked this local epidemic by having the pump's handle removed. Though more famous, this incident is less significant methodologically than Snow's correlation of comparative case rates with an environmental variable. His monograph is still required reading in many epidemiology courses.*

*There is no satisfactory study of Pettenkofer. Useful, especially for its presentation of his so-called grundwasser theory, is Max von Pettenkofer, by Edgar Erskine Hume (New York, 1927). Pettenkofer believed that a specific germ or poison caused cholera, though he did not believe that an epidemic could take place unless soil, seasonal, and climatic conditions were propitious. See Pettenkofer, Untersuchung und Beobachtung über Verbreitung der Cholera... (München, 1855).*
were no more distant than the nearest post office. Immigrant physicians provided another source of knowledge; in Cincinnati, St. Louis, and New York such men were leaders in advocating contagionism. By settling in these opinion-forming urban centers, a few emigrees might exert an influence far out of proportion to their numbers. So rapid, indeed, was the assimilation of Snow’s work in the eastern United States that as early as the summer of 1855, his principles were being applied in the administration of the New York State quarantine hospital. But opponents were still numerous in 1866. Cholera might be portable, but it certainly did not seem to be contagious in the manner of smallpox or syphilis. Older men, like John H. Griscom, Edwin Snow, and Henry G. Clark, who had spent decades in fighting filth—and who had come almost instinctively to oppose contagionist arguments—could not easily accept a doctrine which promised to destroy the rationale of their work. If, and the argument is implicit in their writings, cholera was contagious and not caused by accumulations of filth, then why need streets and houses be cleaned? Commercial interests also found these new ideas—and the rigid quarantines they implied—unpalatable. When William Read, resident physician of Boston, announced his conversion to the “Snow-Pettenkofer” theory of cholera’s transmission, he was quickly reprimanded for espousing doctrines “detrimental to the health, happiness and pecuniary interests of the citizens at large.”

Now, however, the epidemiological anomalies that had exa-

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8 At least one older physician could not conceal his disdain for “some of our young medical men, who take their medical opinions from the last London periodicals, as the chameleon his hues from the colour of the last branch on which he has basked...” Richard D. Arnold, Letters of Richard D. Arnold, M.D. (Philadelphia: G. C. Young, 1846), p. 130. By the spring of 1866, it is safe to say, any medical man accustomed to even glancing at a medical journal would have come across some mention of the work of Snow and Pettenkofer.

New York State Metropolitan Board of Health, op. cit., p. 217 (appendix).

9 Read, A Letter to the Consulting Physicians of Boston... (Boston, 1866), p. 5.
harrassed contagionism in past epidemics could be explained. Knowing that cholera might be spread through a water supply or carried by seemingly healthy persons, the followers of Snow and Pettenkofer were able to discover in the progress of the epidemic further justification for their convictions. Its travelisation by human beings, they asserted, seemed too apparent to admit of doubt; in Chicago, the outbreak of the disease was traced to a Mormon immigrant; in Pittsburgh, a few seemingly spontaneous cases on the outskirts were all eventually traced to contacts inside the city. 11

The common people, of course, continued in their unchanging belief that cholera, like all pestilences, was contagious. Meals were still one of the normal operating hazards of cholera hospitals. But now, the theories of Snow and Pettenkofer, rather than ozone and electricity as in 1849, were urged upon their readers by newspapers and magazines. Contagionism had become respectable.

Naturally, most physicians, as well as laymen, confounded the ideas of Snow and Pettenkofer with each other, as well as with other concepts older and more accustomed. 12 Many physicians able to expose these newer ideas continued to assign a role to the atmosphere in the spread of the disease, while belief in predisposing causes continued to be almost universal—regardless of any other ideas a medical man might entertain. One Yankee physician, for example, who cited Pettenkofer, Snow, and Budd could also mention an imposing catalogue of predisposing causes, among them "lowbeats," and remark that after an epidemic had broken out, an "infection pervaded the air." Other physicians believed that the cholera evacuations had an "infective" or "zymotic" quality only in an atmosphere contaminated with exhalations from decomposing organic matter.


12 The lingering of predisposing causes and its connection with religious and moral motivations will be treated at greater length in the next chapter.
Many doctors who accepted the notion that human excreta had something to do with the spread of the disease, failed to understand that these evacuations could spread cholera only if they contained a specific organism or poison. "It has been supposed," wrote one California physician, "that fecal discharges, under some circumstances, favor the production of cholera—especially those from patients suffering with the disease." A New Orleans doctor agreed with the general opinion that cholera was spread through excreta. "But," he cautioned, "not to the extent that many represent. It has to be concentrated and confined." It was still difficult for many medical men to grasp the idea that a specific disease could be caused only by a specific poison or micro-organism.

But new habits of thought, perhaps less conspicuous, be-tokened the future. Arguments based on formalistic philosophical assumptions almost ceased; statistics and disciplined observation were replacing abstract reasoning. (The imperfections which marred this early work do not invalidate the importance of a newly felt need to perform it.) Contingent-contagionism could, for example, no longer be dismissed as "unphilosophical." Perhaps most striking was the almost unquestioned assumption that cholera was a specific disease. One heard almost

13 Linus P. Brockett, Asiatic Cholera . . . (Hartford, 1866), pp. 62, 96, 99-100, 144-46, 172, 187. The International Sanitary Commission, for example, which met at Constantinople in 1866 and reported unanimously in favor of the idea that the cause of cholera was reproduced in the body of the sufferer, also realized that "the principle of cholera . . . is volatile, and acts in this respect after the manner of miasma: that is to say, by infecting the atmosphere." International Sanitary Conference, Report . . . of a Committee from That Body, on the Origin, Endemicity, Transmissibility and Propagation of Asiatic Cholera, trans. Samuel Abbott (Boston, 1867), pp. 14, 18, 49, 94-95.

nothing of "universal bowel complaints," or diarrhea "shading into cholera," of cholera transforming itself into typhus.  

The assumption that cholera might be caused by micro-organisms met with a mixed, though prevailing, reception in the United States. Twenty years of scientific advance had made the idea seem less bizarre than it had in 1849. Popular alarm, for example, over the "stitching disease" was at its height in the spring of 1866; and even those who opposed the idea that "sterile worms" could cause such a serious illness frequently were led to argue that such parasites were simply normal inhabitants of the human body.  

The work of Pasteur, moreover, on fermentation and spontaneous generation was becoming known to the general public.  

"But let us not destroy our understanding through hindsight. Physicians believing in some sort of "germ theory" were still in a small minority—roughly one in seven—while their ideas were crude and uncultivated. But they were lenient to them; they could no longer be dismissed with a few words of casual ridicule. The painstaking studies of Snow and Pettekeker had provided the epidemiological underpinning for the rapid and universal acceptance in the United States of Koch's discovery of 1883. One might deduct the specificity and portability of cholera and still find fault with the theories of Snow and Pettekeker. The latter, especially, was the object of much criticism. To some, his "sewage theory" was nothing more than an "inconceivable absurdity." It had spread in the human bladder "in a spinach-like manner." It had prevailed in a chalice poured on the top of one thousand feet of solid rock, with the city of the forest of man suspected. Many other critics emphasized the inability of Snow or Pettekeker to explain the "isolated cases" that had occurred.

For representative exposés of the "stitching disease" see the Advocate (Green Bay, Wis.), April 26, 1866; Republic (Chicago), April 26, 1866; Christian Register (Boston), March 11, 1866; Journal of Commerce (New York), March 25, 1866; Sunday Dispatch (New York), February 11, 1866.

11 See, for example, "W," in the Zion's Herald (Boston), July 4, 1866. Illustrative of the big between scientific advance and popular assimilation of such progress is an unsigned article in the New York Times, March 12, 1866, which significantly enough calls the organisms that cause cholera and upon which Pasteur had been working "insects."
the cholera vibrio (1882). As early as 1866, even a firm believer in miasmas had to concede that he was "very fond of the cell theory" and to predict that there was "more truth to be developed from that idea than from any other view before the public mind."

The most compelling of arguments for the organic causation of the disease rested on the assumption that only living things had the power of indefinite reproduction, while epidemiological evidence indicated that the cause of cholera was some specific and infinitely reproducible poison. Though no chemical or microscopic analysis had as yet discovered such minute organisms, "yet their existence cannot be denied, or we must admit that these diseases can exist without a cause." The rapid transmission of the poison and the lethal effect which could be produced by the ingestion of a very small quantity also implied that it had the power of reproduction and was, therefore, organic.

Still, few American physicians were willing to accept wholeheartedly such theoretical considerations; fewer still were capable of understanding them completely. Of greater interest to most American medical men in 1866 were the practical recommendations of Snow and Pettenkofer. Boiling drinking water or disinfecting clothing and bedding were measures that any alert physician or board of health could carry out. At least there was no harm in trying.

Remarks of Dr. John O. Stone at a meeting of the New York Academy of Medicine, February 11, 1866, Bulletin of the New York Academy of Medicine, III (1866), 196 ff.

Cholera had never traversed Europe without subsequently visiting the United States. American men of affairs, and especially those with some interest in medical matters, felt as apprehensive in the fall of 1865 as their counterparts had in 1832 and 1849. Each vessel arriving from Europe that summer and fall brought news of cholera’s further spread. Late in the year, the disease established itself in the West Indies. With cholera in the Western Hemisphere, there seemed little likelihood that North America would escape unscathed.

On the first of September, Secretary of State Seward forwarded copies of letters from the surgeon-general and the American minister in Constantinople to the governors of the several states. The ambassador’s letter described the epidemic and reported that medical opinion considered it contagious; and without hesitation, the surgeon-general in his covering letter urged state executives to establish “rigid quarantines.” Throughout the fall and winter medical societies and local boards of health held meetings and drafted recommendations; what community could consider itself prepared to face a visit from cholera? The editor of the Boston Medical and Surgical Journal, for example, observed that the city’s sanitary condition was even worse than it had been in the disastrous summer of 1849. “The arbitrary measures,” he concluded, “which were then used are imperatively called for now, immediately.”

New York, as we have seen, the city with most to fear, was foremost in efforts to find a solution to her public health problems.

Fear of the impending epidemic was not as intense as it had been in 1832 and 1849 for the recently concluded war still filled newspaper columns and the public mind.

E. Joy Morris was our minister at Constantinople and C. H. Crane, the acting surgeon-general. Vermont, Documents Communicated to the General Assembly by His Excellency the Governor, Concerning the Spread of Asiatic Cholera... October 19, 1865 (Burlington, 1865).

LXXIII (September 28, 1865). 187. For the preparations of other cities, see, for example, Detroit Board of Health, Report of a Special Committee... Suggesting Measures for the Prevention of Asiatic Cholera... (Detroit, 1865); E. L. B. Godfrey, History of the Medical Profession of Camden County, N.J. (Philadelphia, 1896), pp. 94-96.
The Metropolitan Board of Health came into existence on February 26. Within three weeks the board had found quarters, chosen a staff, and issued its first orders. Such speed seemed almost a necessity; the task upon which they had embarked was enormous and the time in which to accomplish it discouragingly short.

Merely cleaning the streets presented a monumental challenge. Every street and court in the city lay, in the words of the *Evening Post*, beneath an accumulation of filth so great that their level was as high above the original grade as the streets of Rome were above the Forum. The board issued its first orders on March 14. By the twenty-third of that month it had investigated and confirmed 1,184 complaints of nuisances and had issued orders against them as “dangerous to life and detrimental to health.” The number of such orders had reached 4,343 by the tenth of April and 7,600 by the first of May.

Such determined and vigorous activity implied careful organization. Fortunately for the board, its administrative problems were immeasurably lightened by the cooperation of the metropolitan police. Not only did police officials offer the use of office space, they organized as well a special “sanitary detail” of picked officers to help in enforcing the board’s decisions. The police telegraph and messenger service were also at the board’s disposal. Each police precinct, moreover, maintained a “complaint book” in which the complaints of private citizens could be made. (Such communication, if signed, could also be made by letter or directly to the board’s Central Office.)

The material in this paragraph is extracted from the manuscript minutes of the Metropolitan Board of Health, now in the care of the secretary of the New York City Department of Health. Metropolitan Board, Minutes, March 14, April 10, May 1, 1866. The number of cease and desist orders issued by the board had reached 18,150 by July 20, 1866.
At the end of each day, the complaints were forwarded to the office of the Sanitary Superintendent. Here they were recorded and sorted, and then sent to the sanitary inspector into whose district they fell. It was only after he had investigated and confirmed the reported nuisance that the Metropolitan Board issued an order against it.

Originally it had been thought that one sanitary inspector could without assistance oversee each of the roughly ten-square-block districts into which the city had been divided. (The sanitary inspectors were all physicians, though the law did not specify that they must be.) It soon became apparent, however, that their task was too great; on March 30, the Metropolitan Board resolved to hire assistants for the sanitary inspectors. With their appointment, the board could call upon an unprecedentedly large and well-trained staff—at least for an American board of health. With the active co-operation of the police, and aided by the efforts of many alarmed New Yorkers, the board’s workers were able to accomplish much in a short time. One Democratic paper, for example, at first critical of the new health board, observed within a month of its having begun work that the Metropolitan Board had already removed filth sufficient to have made a dozen cities intolerable. Nevertheless, there was still much to be done.

In at least one area, however, the board’s efforts had met with little success—it had been unable to arrange for quarantine facilities. New York had had no permanent arrangements since 1858, when an indignant mob had burned the city’s quarantine buildings on Staten Island. The “Falcon,” hastily fitted up as a hospital ship in the fall of 1865, was the board’s only re-

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Metropolitan Board of Health, Annual Report . . . 1866, p. 6 (appendix).
Metropolitan Board of Health, Minutes, March 30, 1866. These clerks, so-called, were to be paid one hundred dollars a month, a respectable salary for the time. Their appointment, however, was only temporary.
Standard (Brooklyn), April 14, 1866.
source. Despite its active and enlightened policy, the board and its president, Jackson Schultz, were unable to overcome popular opposition; ordinary folk objected to being exposed to what they had always regarded as contagious ailments.

This need for quarantine facilities was not long in making itself felt. Late in the afternoon of April 18, the steamer "Virginia" dropped anchor in New York's lower bay. Thirty-seven of her passengers had succumbed to cholera on the voyage and another lay dying. There were only fourteen cabin passengers aboard the "Virginia," and her 1,080 steerage passengers were presumed to have been exposed to the disease. More such infected ships could be expected to arrive, and a permanent quarantine would eventually have to be established.

Cholera had appeared in New York harbor with the first warm days of April; it had been well sown in the fall. Despite the admirable efforts of the new Board of Health, few New Yorkers expected their city to escape unharmed. Six weeks of work, however thorough, could not undo the neglect of years. Cholera claimed its first victim on the first day of May. Another case was reported on the second, and four days later, a third. Ominously, the three victims lived in widely separated parts of the city. George Templeton Strong, like many other New Yorkers, was dismayed. With such sparks scattered throughout the city, it would not be long before they encountered fuel sufficient to start a general conflagration; there were too many tenement houses like that on Mulberry Street in which the second cholera case had occurred, "a nasty overcrowded Irish pigsty." 29

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28 Since 1858, it had been the practice to detain immigrants on board the ships that brought them. Sick passengers might be transferred to a hulk anchored in the lower bay. The board, enlisting the aid of the emigration and quarantine commissions, made a number of attempts to acquire an appropriate tract of land for a quarantine station, but was at first unsuccessful. New York State Metropolitan Board of Health, Annual Report . . . 1866, p. 53-54.
29 Evening Post (New York), April 19, 1866.
30 Allan Nevins and Milton Halsey Thomas (eds.), The Diary of George Templeton Strong (New York, 1950), IV, 81, May 3, 1866. The condition
With the discovery of the first case on Ninety-third Street, the board immediately set in motion prearranged plans to prevent the disease's spread. At the order of Elisha Harris, the bedding, pillows, old clothing, and utensils—anything that might "retain or transmit evacuations of the patient"—were piled in an open area and burned. Chloride of lime was generously strewn through the house, and five barrels of coal tar and other disinfectants distributed so as to cover the surrounding area. The building was quickly evacuated and its inhabitants moved to hospital tents. For the moment, and to the surprise of most New Yorkers, the disease disappeared.

The next case did not occur until the fourth of June; it was followed by a score of others before the month's end. As yet, however, New Yorkers showed little signs of panic. The cases were scattered, few in number, and limited largely to the filthier parts of the city. There was no explosion of cholera similar to those that had taken place in 1832 and 1849. The mildness of the epidemic was no mere stroke of good fortune, observers agreed, but the result of careful planning and hard work by the new health board.

As soon as they were chosen, the board's medical advisors had begun to draft plans. There was little enough time before spring and cholera's almost certain appearance. The Battery Barracks were secured from the secretary of war for possible use as a hospital (though a cordon of police had to be provided to protect the barracks from violence). Another building was procured for storage of the chemicals to be used in disinfection of the excreta and personal effects of cholera vic-

of the house at 113 Mulberry Street seems to have been particularly disgraceful. The rooms were tiny, and some of the residents of the five-story building were forced to board up their windows because of the odor rising from the filth deposited in the narrow airshafts separating theirs from adjoining buildings. "Add to this the custom borrowed from untutored animals confessedly low in the scale, of depositing feces in the halls, and the picture of this haunt of the lowly may be pronounced complete." Medical Record, I (May 15, 1866), 172.

New York Times, May 1, 1866; Evening Post (New York), May 1, 1866.
tions. A number of wagons were purchased; and these, together
with a sufficient complement of horses, were kept in a stable
close by. Also quartered nearby and in constant readiness were
details of men specially trained in the use of disinfectants.

When, on May 1, the city's first cholera death was reported,
this plan was put smoothly into operation. Each case was re-
ported at the closest police precinct station. The victim's ad-
dress was immediately telegraphed to the board's Central
Office, which quickly dispatched a wagonload of disinfectants
to the infected premises. Within an hour of the original report
having been made, a detail of well-trained men would be at
work disinfecting the clothing, house, and effects of the victim.

Soon after the board was organized, and well before the
city's first case of the disease, an anticholera mixture was pre-
pared and distributed in one-ounce vials to the several precinct
houses; they were to be distributed to those of the poor com-
plaining of cholera's premonitory symptoms. With the co-op-
eration of the city's privately endowed medical dispensaries, a
"movable corps" was established for house-to-house visita-
tion.22 Arrangements were made as well for providing with
food and clothing those families which might be stricken by
cholera. The desperate improvisations of 1832 and 1849 would
not be re-enacted in 1866.

Even with its new powers, however, the board was not im-
mediately able to find a solution for all of its problems. Two
dilemmas were particularly intractable—the problem of pro-
viding quarantine facilities and that of improving the city's
sanitation. In the first instance, the board had to oppose tradi-
tional fears and, in the second, traditional practice, specifically
the contract system of street cleaning and waste disposal. In
neither area was the Metropolitan Board completely successful.

But not because of a lack of effort. Judicial injunctions
ultimately frustrated the elaborate—and almost ludicrously
surreptitious—attempts of the board to acquire and fit out a

22 New York State Metropolitan Board of Health, Annual Report . . . 1866,
p. 21 (appendix); Metropolitan Board of Health, Minutes, April 27, 1866.
quarantine hospital. The problem of sanitation was even more annoying. Throughout the spring and summer of 1866, the new board and its preternaturally energetic president, Jackson Schultz, were mired in the seemingly hopeless task of attempting to force the city’s contractors to fulfill the conditions of their contracts. (It will be recalled that street cleaning and waste disposal were performed for the city by private contractors.) On the fifteenth of March, for example, at the board’s second meeting, President Schultz met with all the contractors; past sins, he conceded, would be ignored if they would carry out their tasks in the future. If not, he threatened, the city would have the work done and charge the expense to the contractor. Such threats and cajoling were repeated again and again, though to no avail. The moral seemed clear; a great city could not depend upon private contractors for the carrying out of such vital tasks. Especially when, as was clearly the case, such contracts were regarded as political rewards rather than commercial obligations.

New York’s bench added as well to the board’s difficulties. Despite its theoretically almost unlimited powers, the orders of the board were nullified again and again by injunction. This was a decade of understanding judges; the first injunction against the board’s activities, for example, was issued by Judge Barnard, whose role in the Byzantine affairs of the Erie railroad has earned him a secure, if small, place in history. A month later, the same justice issued another injunction in the name of a number of Staten Island property owners, enjoining the use of Seguine’s Point for quarantine purposes. (Judge Cardozo of the Court of Common Pleas was also prevailed upon to issue injunctions against the enforcement of certain parts of the sanitary code.) Equally handicapping to the board was the court’s defeat of its attempts to exercise preventive powers. As interpreted by New York judges, the board’s powers extended only to the correction of existing abuses. A health officer might, for example, order a vacant lot cleaned, but, thought it were obvious that the lot would within a week be
buried again in filth, he had no power to have a fence erected to prevent it.

Legal obstacles were not the only ones placed in the way of the board; a creation of a Republican legislature, it was consistently opposed by the city's Democratic papers and politicians—at least at first. The board, they charged, was the creation of "rural lawyers," who saw no harm in giving non-elective commissioners such wide executive powers. Once the board had begun its work, it was not difficult for Democratic journalists to convince lower-class readers that the policies of the board favored the rich at their expense. The poor were as unprepared to accept the absolute authority of science as they had been to accept the moral absolutism it was replacing; and it was only by assuming the values of science and accepting its dictates as above dispute that the seemingly authoritarian policies of the health board could be justified. To the editor of the Catholic Freeman's Journal, the "In-Sanitary Commission" was "positively a detriment to the health of the city, and a vile annoyance." The board, he charged, had been quick to attack the Washington market—a boon to widows and thrifty boarding-house keepers—but had done nothing about the tenement houses, the real source of danger to the people's health. The physicians attached to the board were not its guiding force, he added, but merely the dupes of the "two or three sharp political swindlers" who employed the authority of science as a cloak for their malefactions.

Appendix "E," pp. 358-65, in the Annual Report for 1866 of the Metropolitan Board is the report of the board's attorney.

Leader (New York), April 14, 1866. Conservative Democrats, who tended to represent circles with greater education and social status, had never opposed the board as violently as had the Freeman's Journal, for example. As the spring and summer advanced, their lingering opposition turned to praise. The board was the kind of issue upon which social—and in New York, necessarily ethnic—considerations might take precedence over normal political alignments.

April 21, 26, 1866. Indicative of the class assumptions implicit in the editor's appeals was his attack on the board's announced policy of requiring marriage registration. What, he asked, of the cases in which a marriage certificate must be postdated in order to preserve a woman's reputation? Freeman's Journal, May 26, 1866.
These arguments only confirmed the fears of conservative Americans, already feeling misgivings about immigrants and, in a few cases, already questioning the viability of democracy itself. It seemed to them that every step toward efficient and responsible government was opposed by the forces of ignorance and immorality. How, for example, they asked, could one hope to institute a successful public health program among an illiterate and vicious population? European governments could command; Americans must depend upon the enlightenment of the voters and those they elected. Ours was a system of government devised and practiced "by the old American population of fifty years ago, those quiet, thrifty, reading farmers, who laid the foundations of American society, who were for two centuries its boast and glory, and are still its salvation. . . ."

Unfortunately, these "reading farmers" were being replaced by people of a very different sort. American democracy would, in their hands, come to be synonymous with "unlimited license, unrestrained brutal indulgence, and the overthrow of every principle which has made American institutions superior to those of other countries."

Opposition to the board's policies was inevitable, its complete success beyond the hopes of its most enthusiastic supporters. The surprises of the board's first year were all pleasant ones. Though New York had greatly increased in size between 1849 and 1866, there were only a tenth as many cholera deaths in the latter year. What stronger testimony could there be to the achievements of this new-model health board?

Even bitter opponents finally admitted that the board had proven itself honest and efficient. A Democratic editor, for example, vigorously opposed to the Metropolitan Board at

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30 Nation, II (May 11, 1866), 600-601.
37 Christian Intelligencer (New York), June 7, 1866. "Is democracy henceforth to be the sole creed of the lawless, reckless, disobedient masses . . . ?" asked the troubled editor.
38 There were only 591 deaths in New York. New York State Metropolitan Board of Health, Annual Report . . . 1866, p. 189 (appendix).
first, was forced by September to declare that "if we had had no Health Board we would probably have had a great deal more cholera." Equally significant was the unwilling praise accorded the board's efforts by a homeopathic physician. New York's relative immunity from cholera was, he confessed, "in no small part" due to the Board of Health, for it was undoubtedly efficient, "though as bigoted as the inquisition of old."40

There was no denying the immense work it had accomplished. The board had, for the first time, cleaned the city's streets, had even made New York's air a bit more breathable—but not without effort. One of the board's first tasks, for example, was the removal of some hundred and sixty thousand tons of manure from vacant lots. Between the fourteenth of March, when the new health board issued its first cease and desist order, and the first of November, 31,077 such orders were issued and served. Some four thousand yards were ordered cleaned, 77 cisterns ordered emptied, 6,418 privies disinfected.41 Only by such thoroughgoing labors could a city be protected against disease.

The lesson taught by the Metropolitan Board was a simple one. A board of health had, by its efforts, turned away a cholera epidemic from the largest and most congested city in North America. Medical men and concerned citizens in general throughout the United States called for the creation in their communities of health boards similar to that which was credited with having saved New York.42 No American city

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40 Compare the editorial comments in the Metropolitan Record, a violently "Copperhead" publication, on May 19 (p. 15) with those made by its editor on September 8 (p. 2) and July 7 (p. 2).
41 United States Medical and Surgical Journal, II (1867), 350.
42 New York State Metropolitan Board of Health, Annual Report . . . 1866, pp. 18, 26, 38.
43 Cf. H. Gibbons, Pacific Medical and Surgical Journal, IX (1866), 216; Thomas N. Bonner, Medicine in Chicago, 1822–1922 (Madison, 1957), pp. 180–81; Enquirer (Cincinnati), August 9, 1866; Weekly Missouri Democrat (St. Louis), July 31, 1866; Catholic Mirror (Baltimore), April 7, 1866; J. R. Stevenson, "A History of Cholera in Canada in 1866, and of the Measures Adopted for Its Prevention," Transactions of the Medical Society of New Jersey, 1867, pp. 236–37.
possessed a board of health with powers even approximating those of the Metropolitan Board of Health—and few such cities escaped cholera as lightly.

The public concern which had in the spring of 1866 lent urgency to the plans of the Metropolitan Board of Health was not limited to New York. Sanitary commissions and boards of health throughout the nation were created, activated, or refurbished. None, however, were endowed with the broad powers of the Metropolitan Board of Health; none were staffed by medical personnel as competent, energetic, and well informed. In Cincinnati, for example, the Board of Health had managed to keep the streets fairly clean, but was unable to force private property owners to abate nuisances in their houses and yards. The president of Buffalo's Health Board, though a medical man, received a salary of $150 per annum—distressing indication of how demanding his duties were expected to be. Smaller communities were even more casual in their gestures at public health reform. The citizens of Staunton, Virginia, were, for example, reminded that "throwing dirt, dead dogs, cats, &c, on the street any day but Saturday, will subject them to arrest and fine." Staunton was, unfortunately, no more errant than many American towns.

Or large cities. Chicago had no board of health at all; since 1861, the protection of the city's health had been the responsibility of the police department. In Cincinnati, no hospital was provided for cholera patients until the daily death toll reached ninety. It seemed hardly surprising that neither city escaped cholera lightly. The moral was equally clear; in March of 1867, the Illinois state legislature provided Chicago with a board of health modeled closely on that of New York.44 The

44Chicago's Common Council had, like New York City's local government, opposed the establishment of such a health board. Chicago Board of Health, Report of the Board of Health of the City of Chicago, for 1867, 1868 and
entire United States, not only New York, was ultimately to benefit from the far-sighted efforts of those physicians, lawyers, and reform-minded citizens responsible for the creation of the Metropolitan Board of Health. Disease could be prevented—this was the truth made undeniable by the success of the Metropolitan Board of Health. Physicians had tried to cure cholera; 1866 had shown them their duty was to prevent it.

46 The details of the statute drafted by Dorman Eaton provided as well the legal mechanisms through which the inspiration of the board's achievements could be transformed into administrative reality. Stephen Smith, City That Was (New York, 1911), p. 178. Its provisions were copied again and again in succeeding decades as other American communities created their own boards of health.
The Metropolitan Board of Health had shown that cholera could be prevented—not with prayer and fasting, but through disinfection and quarantine. To ministers as well as physicians, government had no greater responsibility than to preserve human life; the gospels of Snow and Chadwick, not those of Mark and John, promised deliverance from cholera.

God was still in his heaven, as most Americans would be quick to affirm. Yet the fact of his existence had ceased to be a central and meaningful reality in their lives. The warnings of perceptive divines in 1832 were proving justified; material preoccupations and empirical habits of thought had not so much defeated as displaced the spiritual concerns of earlier generations. America seemed well on the way toward becoming a land of "practical atheists."

Revolutions in thought are always gradual, however, and older values continued comfortably to coexist alongside the new. Moralism, if not theology or piety, still pervaded medical thought, as it did the American mind in general. Sin, in the scientific guise of predisposition, could still induce a case of cholera. Not until the advent of that converting ordinance, the germ theory, did most physicians completely accept the idea of specific disease entities and begin to make an absolute distinction between physical and psychic maladies.

The American medical profession was in transition in 1866. While medical science had already entered an age of heroic achievement, the practitioner of medicine still occupied much
the same lowly status he had in 1849. The critical temper productive of the scientific advances that have so transformed the status of the American physician in the twentieth century served in 1866 merely to underline the profession's real, if transitory, inadequacies.

On October 4, 1865, a group of public-spirited New Englanders met in the Massachusetts' statehouse to found a Society for the Promotion of Social Science. The methods of science could, and must, they felt, be applied to the study of human society. The activities of this new association were to be divided among four "departments," the first three of which (education, jurisprudence, and social economy) represented no novel interests. The fourth, however, was something of a new departure for those interested in social betterment. It was sanitary reform.

Physicians could not help those stricken with cholera. Medicine offered no remedy for smallpox. Yet science had shown that both diseases could be prevented, the one by vaccination and the other through disinfection and quarantine. What, one might well ask, had medicine ever contributed to the sum of human happiness? The answer was all too obvious to those skeptical of traditional remedies: the only real contribution of medicine to civilization was the sanitary and hygienic regulations it had helped institute. Such laws were worth more than all "the drugs of Galen and Paracelsus combined." Not only in the United States, but throughout Europe, cholera demonstrated forcefully that a disease that could not be cured must be prevented. Acting as a catalyst, cholera helped to bring about the creation of the public health reforms demanded by the almost unendurable conditions of the nineteenth-century city.

The statistics gathered by a generation of public health workers had convinced Americans of the necessity for sanitary reform; what objective could take precedence over that of

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1 Nation, I (October 12, 1865), 449.
preserving human life? Though cholera might appear once in a generation to destroy thousands of lives, tuberculosis and pneumonia killed as many each year. Fortunately, however, the legislation enacted to prevent cholera would help banish these everyday ills as well. No city could call itself civilized that neglected such mundane matters as sewers, drains, and wells. As Cincinnati's health officer put it:

Before erecting statues, building opera houses and art galleries, and buying expensive pictures, towns should be relieved of bad odours and fermenting pestilence. Good privies are far higher signs of civilization than grand palaces and fine art galleries.

Life itself must be guaranteed to man before one could hope to improve his mind—or his soul.

The clergyman was beginning to accustom himself, as the physician already had, to thinking in environmental terms. "What opportunity is there of benefiting the souls of man," questioned one Methodist preacher, "while their bodies are thus crowded and packed in such filthy abodes?" To experi-

2 During most of the centuries before the nineteenth, of course, such a rhetorical question might well have received the immediate answer, "many." For a discussion of early ideas regarding the prolongation of human life, see Gerald J. Gruman, "A History of Prolongevity Hypotheses to 1800: The Evolution of Ideas about the Prolongation of Human Life," (unpublished doctoral dissertation, Harvard University, 1960).

3 William Clendenin, Daily Gazette (Cincinnati), July 13, 1866.

4 J. M. Freeman, "New York City as a Mission Field," Methodist, VI (December 30, 1865) p. 409. The connection between man's physical and moral well-being was hardly a novel one. Cf. John Griscom, The Sanitary Condition of the Laboring Population of New York (New York, 1841); New York Association for Improving the Condition of the Poor, First Report of a Committee on the Sanitary Condition of the Laboring Classes in the City of New York . . . (New York, 1851), pp. 3-4. Particularly revealing in this connection is the position of Jackson Schultz, the president of the Metropolitan Board of Health, in the board's Annual Report . . . 1866, p. 11.

His professional contact with disease and poverty often leads the physician toward criticism of the society that allows such conditions to exist. Rudolf Virchow's experiences as a young man in fighting a Silesian typhus epidemic, for example, made the great pathologist a confirmed liberal for the rest of his long life. Erwin H. Ackerknecht, Rudolf Virchow (Madison, Wis., 1953). See also George Rosen, "Disease and Social Criticism: A Contribution to a Theory of Medical History," Bulletin of the History of Medicine, X (1944), 5-15.
ence, as did the board of health officer or the city missionary, the conditions of tenement life was to discredit moralistic explanations of poverty as well as of disease. Alcoholism, for example, seemed to such environmentally oriented Americans not so much a cause of poverty as a consequence of the misery in which the poor were forced to live. "If you lived in this place," a drunken slum mother bitterly replied to the health officer's inquiries, you too "would ask for whiskey instead of milk."

Material evils demanded material remedies. Disease, for example, could not be conquered until better housing was provided for the poor. If tenements must exist—and there could not be cities without them—they should be as clean and well ventilated as architecture and engineering could make them. The Five Points must be regenerated, one liberal editorialist agreed, but it could not be accomplished with missions or Bible classes: "The remedy of all evils in great cities," he asserted, "must be topographical."

The achievement of municipal and personal hygiene were goals well within the canon of traditional Protestant values. Yet cleanliness was coming more and more to be a real and sufficient good, not merely a symbol of spiritual grace. It was a goal, nevertheless, and one which could for its fulfillment call upon those moral energies accumulated by an earlier generation in its struggle for salvation. Personal cleanliness was urged with an almost transcendental zeal; bathing, for example, promised moral as well as physical rewards:

That horrible class from which come the wretched, the vicious, the depraved, would be sensibly diminished, for the "great un-washed" would exist only in name; the "great washed" would be, in a measure at least, the "great virtuous."

6 New York State Metropolitan Board of Health, Annual Report . . . 1866, p. 115 (appendix).
6 Citizen (New York), March 31, 1866.
7 Reverend Octavius B. Frothingham, Universalist (Boston), May 16, 1866.

If temporal matters intruded into the realm of the spirit, spiritual needs displayed on occasion the same sort of imperialism, cited Christian Science.
The distinction between the physical and spiritual had become increasingly indistinct.

Christianity defined clearly the duties of the employer toward his employees and of the landlord toward his tenants. With men's eyes fixed on the world around them, the failure to fulfill such responsibilities became ever more apparent—especially in cholera times. Statistics had proven what common sense had already known: in any epidemic, those who had the faintest chance of surviving were those who lived in the worst conditions, in the dirtiest, most crowded, and least ventilated houses. It was clear that men who knowingly allowed such conditions to exist were guilty, in a sense, of murder. If, one editor commented, there was a moral in cholera, it was that the landlord who grew "rich by the misery of the poor, who derives revenue from over crowded tenements and cellar lodging houses is guilty of a crime against humanity and against God."*  

Science provided not only the appropriate goals for reform, but implied a new strategy for their attainment. Criticism of social injustice might now be couched in pragmatic terms, terms congenial to the moderate aspirations of respectable Americans. Clean and airy tenements, an honest and competent civil service, were goals that readily won the support of the thoughtful and educated. Society as a whole need not be rejected in order to make a better world. Social injustice was simply another problem to be solved. The absolutist frames of reference assumed in 1832 seemed no longer particularly relevant to the needs of most Americans in 1866.

The cholera epidemic, declared George Templeton Strong, "is God's judgment on the poor for neglecting His sanitary laws." To die of cholera was still a sign of moral indiscretion; poverty was still very much a result of moral failings. It was not, as a city missionary put it, "that the poor are invariably ignorant and vicious, or the rich learned and virtuous.

* Standard (Brooklyn), May 5, 1866.  
Allan Nevins and Milton Halsey Thomas (eds.), The Diary of George Templeton Strong (New York, 1952), IV, 95-97, August 6, 1866.
We only assert the union here, as in other places, of the three most terrible evils that afflict society—poverty, ignorance, and crime. Such age-old ideas were not easily discarded, despite the century's increasing environmentalism.

In the classifications of formal rhetoric, the poverty of anyone not widowed, or crippled, or feeble-minded was somehow culpable. Wealth, in like manner, was still in most cases the product of industry and intelligence. If it was the duty of the employer to care for his employee, it was equally the duty of the worker to identify himself completely with the fortunes of his employer. Even advocates of public health reform found it difficult to dissemble the instinctive diatribe which they felt for the dirty and uncouth slum dweller.

It still seemed natural that cholera should single out such persons for destruction. As the New York Times (April 22, 1866) expressed it: "Cholera is especially the punishment of neglect of sanitary laws; it is the curse of the dirty, the intemperate, and the degraded." The three adjectives were closely related and, to most Americans, at once cause and consequence of poverty. To ardent temperance advocates, the banishment of liquor would curb poverty as neatly as it halted cholera.

Nor was there any necessary inconsistency between the ideas that cholera was caused by "dirty water" and that it was provoked by intemperance. One still had to predispose oneself to a disease before it could be contracted. There seemed little reason for most physicians to doubt the importance of predisposing causes in explaining the occurrence of cholera; even the most convinced believer in the disease's specificity had somehow to explain why only some of those exposed to its

10 And this from the same Reverend Freeman, cited earlier (n. 4) for his advocacy of the idea that men's souls could not be saved while they lived in filth. *Methodist, VI* (December 23, 1865), 401.

11 In New York's slums, for example, wrote the editor of the Albany Journal (February 6, 1866) in the course of an appeal for the passage of the Metropolitan Board of Health Act, the visitor would "behold the excess of degradation of which pure animalism is capable, in a grade of humanity which literally wallows like swine in the mire."
specific cause became ill (a problem conveniently ignored in the overeager acceptance of the germ theory during the last decades of the century).

The list of possible predisposing causes had not lengthened greatly in the years since Americans first encountered cholera in 1832. (After all, there are only so many misdeeds one is capable of committing.)

As to what are the exciting causes of cholera, there appears to be no diversity of opinion throughout the medical profession. . . . Those arising from personal condition are intemperance, profligacy, immorality, uncleanness, fear, sensual indulgence, excessive labor, extreme fasting, unwholesome diet, want of sleep. . . .

Yet the espousal of this moralistic etiology was becoming increasingly uncongenial to the more critical among the medical profession. This doctrine seemed to them founded upon Philistinism and moral complacency, not upon the verifiable truths of science. "Must," complained a prominent Cincinnati practitioner, "every poor victim of cholera have written, 'In Memoriam', that he was low Dutch, or low Irish, or intemperate, or licentious or a groveler in filth, or a suicide from imprudence?"

Though a few physicians might argue that cholera was not a specific disease or that it might find its origins in local "exciting causes," the great majority wholeheartedly accepted the idea that cholera was a specific disease, the result of having imbibed some quantity of a specific poison. Though predisposing causes had, as we have seen, not disappeared from med-

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12 William Read, A Letter to the Consulting Physicians of Boston . . . (Boston, 1866).
13 W. H. Mussey, Cincinnati Lancet and Observer, IX (1866), 616-17.
14 See William B. Fletcher, Cholera: Its Characteristics, Treatment, Geographical Distribution . . . (Cincinnati, 1866), pp. 19, 24; M. L. Linton, Medical Record, I (1866), 143; Julius Miner, "Reasons for Fearing the Appearance of Cholera in Other Epidemics," Buffalo Medical and Surgical Journal, V (1866), 112; ibid., V (1866), 199; N. S. Davis, "How Far Do the Facts Accompanying the Prevalence of Epidemic Cholera in Chicago . . . Throw Light on the Etiology of That Disease?" Chicago Medical Examiner, VIII (1867), 646.
ical thought, they had become increasingly an afterthought.\textsuperscript{16}

The hand of God was being withdrawn from the world. With each epidemic, the role of the divine in causing cholera had become a smaller one. Even the moralism informing the doctrine of predisposing causes existed tenuously, without either the formal underpinning of theology or the emotional assurance of personal piety; religion was in danger of becoming a social gesture.

Far less than in 1849 did cholera provoke an explicit ideological conflict between scientific and religious ideas.\textsuperscript{19} Most clergymen called no longer for fast days and spent little time in asserting God’s power of intercession in earthly affairs. Disease was a result of having failed to observe the laws that he had established for the government of the world. “Dirt and degradation are antagonistic to divine law”; men would naturally suffer if they persisted in defying the divine ordering of things.

The familiar arguments of 1832 and 1849 were repeated once again—but with an increasingly secular tone. Only God could give or take away life, true. Yet he co-operated with every attempt to increase man’s health and happiness. Vaccination, as one clergyman pointed out, had saved at least four hundred thousand lives in Europe alone during the past half-century. There had been no evidence of divine displeasure at such “impiety.” On the contrary, he concluded, “we may reasonably hope that with increasing health will come a nobler opportunity for that holiness which is only the perfect whole-

\textsuperscript{15} As one might suppose, the more clearly one accepted and understood the newer ideas of epidemiology, the smaller the role one allotted to predisposing causes. Snow, for example, declared that “to be of the human species, and to receive the morbid poison in a suitable manner, is most likely all that is required.” “On Continuous Molecular Changes. . . . Being the Oration Delivered at the 80th Anniversary of the Medical Society of London,” Snow on Cholera (New York, 1936), p. 161.

\textsuperscript{16} The lack of precision with which religious and scientific ideas were expressed is, of course, another reason for the surpassing ease with which they were made to dovetail.
ness of body and soul in man, the wondrous immortal child of God. 10

Fast days were beginning to seem the concern of fanatics. The Independent (August 16, 1866), probably the most influential religious paper in the United States, retold with evident relish, for example, the famous anecdote of Lord Palmerston's having refused the request of a delegation from the Scottish Kirk for the declaration of a fast day against cholera, urging them instead to go home and clean their streets. God had commanded us to obey his ordinances, and there were none more important than those which bade us to keep clean and healthy. There was no necessary conflict between the truths of science and those of revealed religion. "Science and Religion may each one shine with a new and peculiar beauty in each other's light; they cannot obscure or destroy one another." 11 Yet skepticism often lurked beneath the cloak of science; piety had more to fear from the subtle skepticism of Darwin and of Buckle than it had from the blatant atheism of a Paine or Volney. Consider, for a moment, the apparently abstract question of spontaneous generation: Were Pasteur's opponents in the right, life might come into being at any time, thus undermining God's unique role in creation. Men of the cloth could not reject these new sciences. Indeed, it was their duty to study them, for the church needed "men who can thread all the windings of scepticism, and wrest the weapons of infidelity to its own destruction." 12


18 Christian Intelligencer (New York), January 18, 1866. The "conflict between religion and science," so beloved of historians, has, at least in the United States, been more a class and regional than an intellectual struggle. The evolution controversy, for example, drew its emotional intensity not from the irreconcilable nature of the ideas involved, but from urban-rural and upper-lower class cleavages.

The status of the medical profession was, in 1866, not appreciably different from what it had been seventeen years earlier. The average physician was still poorly educated and not overly genteel. Even more important, he was a dispenser of nostrums only a bit less heroic than those prescribed by his teachers.

Educational standards were, if possible, lower. As the operation of a medical school was a source of income, there was little reason for turning away prospective students. Neither a college degree nor, what was far more scandalous for the time, a knowledge of the classics was required for entrance into medical school; the profession, it was clear, made few demands on the student physician's intelligence. Which, lamented the president of the Pennsylvania Medical Society, "is, obviously, a great cause why so many feeble-minded boys are dedicated to its study." Despite the establishment of the American Medical Association's Code of Ethics (1847), commercialism, rivalry, even fraud continued unchecked. (Such desperate competition might be expected in the absence of uniform licensing provisions and at a time when minimal education standards prevailed.) Physicians, like other Americans, were businessmen; the rigid institutional codes traditionally associated with the profession seemed somehow irrelevant.

Yet there had been some changes in medical practice. Most obviously, the physicians' remedies had become somewhat less traumatic. The reasons for this change are several—and illuminating. An obvious reason, of course, was the discouraging experience that Americans had had with cholera. Medicines had shown themselves to be useless, once well-marked symptoms of the disease appeared. Experience had made clear, and by 1866 it was fashionable to report, that those cholera pa-

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21 A study of prescriptions in Louisiana, for example, shows that bleeding and cupping were not used at all after the 1849-54 cholera epidemic. In 1866, the doses of the still lucrative calomel had decreased. Leland A. Langridge, "Asiatic Cholera in Louisiana, 1832-73" (unpublished Master's thesis Louisiana State University, 1955), pp. 124, 128.
tients who did best had merely been kept warm and given no medication aside from a bit of wine or broth. Reinforcing this bitter experience with cholera itself was a newly critical spirit, which only in academic medicine resulted in a doctrinaire rejection of traditional remedies (so-called therapeutic nihilism), but which helped in general to promote a more sceptical attitude toward the received truths of earlier generations.

It was no longer sufficient to ask simply whether a remedy was effective in treating symptoms. What, more critical physicians already asked, caused these symptoms, and what, if any, was the effect of a drug on such an underlying cause? The most important problem, they argued, lay in the physiological mechanisms by which a proposed remedy might work. Generations of physicians, for instance, had accepted unquestioningly the idea—derived from the Galenic humoral theory—that calomel acted on the liver. But did it? And if so, how?

Such theoretical niceties were suited to the Harvard and Pennsylvania faculties, to physicians trained in the clinics of Paris, London, or Dublin. They were a long time in trickling down to the ordinary practitioner, he continued to purge, puke, and sweat his patients—though, to be sure, a bit less vigorously than had been his custom.

The increasing mildness of his remedies was, however, due more to the mundane factor of competition than to abstract considerations of scientific method. Regular physicians had to offer a therapy as attractive as that proffered by the homeopaths, hydropaths, eclectic, and botanics with whom they competed. If remedies did not heal, they might at least be pleasant. And it was increasingly difficult to believe that medicines actually did heal. Physicians could not guarantee results; and without such pragmatic justification, Americans could see little reason to grant the regular profession's apparently self-serving demand for a "monopoly" of medical practice. During cholera times, sectarian opponents charged, such demands were not merely selfish, but criminal.

Only after great pressure had been placed on the Metropol-
ian Board of Health did it grudgingly allow homeopathic physicians even a small role in combating the epidemic. Never had the "small trickery and professional charlatanism" of the regular medical profession been more evident; nor only was such behavior unjustified, dissidents claimed, it was contrary to the beliefs of every American. In New York, the Homeopathic Medical Society charged, devotees of their system paid half of the city's taxes and constituted at least 50 per cent of its educated population. Yet this numerous and respectable group was being deprived of its equal rights in the choice of physicians hired by the city. What could be more undemocratic?

The narrow and intolerant views of the regular medical profession were, moreover, a hindrance to the progress of human knowledge. As in 1849, the household idols of American rhetoric were employed in attacking the pretensions of the regulars—and especially the "pitiful sectarian spite and miserable meanness of the American Medical Association." Our banner, declared the president of the Homeopathic Medical Society of Pennsylvania, "is the banner of progress and medical freedom—themselves ... are no progress and medical slavery." Hahnemann suffered the same neglect in 1866 that Harvey and Jenner had in earlier centuries; the medical profession was still a bastion of conservatism. It was not a branch of science—homeopathic physicians appealed knowingly to American

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22 The lay administrators of the Metropolitan Board were initially quite friendly to homeopathy, but were subjected to the pressure of the New York Academy of Medicine, which threatened to withdraw its support from the board should it allow homeopathic physicians to practice in the city's cholera hospitals. Eventually, however, the board did permit these medical dissidents to direct wards at the Battery Barracks and Five Points hospitals.


24 Herald of Health, VI (1865), 59.
values—but rather a “caste institution” having no place among the free institutions of the United States.26

As in 1849, it was the better educated and more respectable members of society who provided much of the support for medical sectarianism, a situation no more congenial to the amour-propre of the medical profession in 1866 than it had been seventeen years earlier. Horace Greeley, for example, found “medical reform” one of the more socially acceptable of his causes. The establishment, he asserted, of an eclectic medical college

... is a palpable expression of a desire for free thought. Resistance to orthodoxy, I think, is doing good in the world. ... The men who were stoned to death in their day, and the stones used afterward to build their monuments, were the men who initiated radical changes, instituted great good.26

What American could oppose progress and the scientific advances that made it possible?

The situation of the medical profession was a bleak one. Yet the first signs of the scientific revolution soon to transform it were already discernible in 1866.27 At the same time, Americans accepted a system of values that would automatically translate the achievements of science into the coin of public esteem. Coming events had already begun to cast their shadows.


26 New York Eclectic Medical Review, II (1866), 178.

27 It is worth noting, for example, that in 1866, an American physician for the first time attempted through controlled animal experimentation to discover something of the physiological action of cholera. Robert Bartholow, Cincinnati Lancet and Observer, N.S. IX (1866), 658-59.
It was not until the nineteenth century that cholera invaded the Western Hemisphere. Yet at its first appearance, it represented as much a mystery as had the plague five centuries earlier, for the theoretical resources of the average physician in 1832 were not greatly different from those of his medieval predecessor. By 1866, however, only thirty-four years after their first experience with cholera, even provincial American practitioners were familiar with the names of Snow and Pettenkofer, Liebig and Berzelius.

American medical thought had passed seemingly through centuries rather than decades; new ideas, new assumptions, and new habits of thought had supplanted those dominant forty years before. American physicians readily accepted the discovery of the cholera vibrio in 1883. Many had expected it, for they had been brought step by step to an intellectual position that could readily assimilate it. When, in 1873, cholera attacked the United States for the last time, few physicians clung

1 Quoted in the People's Friend (Covington, Ind.), September 8, 1849.
unreservedly to traditional concepts of disease. The inadequacy of such ideas had become more apparent with each succeeding cholera epidemic. Dozens of communities, large and small, now utilized the preventive measures which had seemed to protect New York City in 1866.  

Cholera could not have been conquered in 1852. The concepts that enabled Snow to construct a meaningful theory of its causation, the statistics that helped him in validating his ideas, the public health organization that could put this knowledge to use, did not exist in 1852. Yet the conditions that nurtured cholera already existed. An urban and industrial, material culture had come into being in a society whose habits of thought and patterns of collective action had been those of a simpler, largely rural world.

The achievement of the Metropolitan Board of Health in the summer of 1866 has a historical significance transcending its undeniable importance in the development of public medicine. It was one of the first successful responses to a specific challenge of this new industrial society. So well-conceived a response could only have been made with ideas and artifacts of this new society and, equally important, only after its existence had been accepted. Americans had come to realize that their nation was like other nations—better than most perhaps, yet no longer different in kind. The problems of the Old World had become those of the new. With this realization, the first step had been taken in finding a solution to these problems.

America had changed in the thirty-four years between 1832 and 1866; new states were created out of wilderness, villages

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For numerous examples of the application of these methods see U.S. President: The Cholera Epidemic of 1853 in the United States, Exec. Doc. No. 55, Part A, 43d Cong., 2d sess.

Without having at his disposal the idea of ferments, of catalysis, and of disease specificity, it is highly doubtful whether Snow would have been able to formulate his preventive theory. Had he by some chance deduced it in 1852, it would have been found few believers. Even in 1860, only a few physicians were ready to accept, or understand completely, his idea.
grew into cities, cities into metropolises. Railroad and telegraph lines contracted the nation's newly acquired continental dimensions, initiating a uniquely American attitude toward space and time. The labor of Irishmen, Germans, even Chinese had helped to bring about so rapid a transformation. The face of the nation had been altered; the character of its population had shifted as well. These material developments had, inevitably, their counterparts in intellectual changes equally far-reaching.* Americans in 1866 looked at a new world—and through new eyes.

Cholera in 1866 was a social problem; in 1832, it had still been, to many Americans, a primarily moral dilemma. Disease had become a consequence of man's interaction with his environment; it was no longer an incident in a drama of moral choice and spiritual salvation. This was not an abrupt change, neither was it a consistent and conscious one. Respectable Americans had not wavered in their theoretical adherence to the ultimate significance of spiritual rather than material goals. We find, between 1832 and 1866, shifts in emphasis, not positive avowals or recantations. That part of men's lives and emotions occupied by matters of the spirit had simply decreased. The circumstances of everyday life were too demanding—and in America's great cities, appalling.

The conditions of tenement life were intolerable. To a generation raised in an atmosphere of militant Protestantism, such evils could not be allowed to exist unchanged. It is no accident...
that many of the leaders in the early public health movement in England as well as in the United States were men of deep religious feeling. Not even so doctrinaire a Benthamite as Edwin Chadwick could escape the all-pervading influence of such moral enthusiasm; it was the spirit of the age. The matter-of-fact meliorism of the Metropolitan Board of Health is not necessarily a symptom of the dissipation of spiritual energies, but rather of these energies having been diverted into new channels.

The means of reform had changed, not necessarily its ends—or so pious Americans could believe. The salvation of man’s eternal soul was the only real goal of the church. By 1866, however, it was becoming increasingly apparent that the soul could not be made healthy while the body which housed it was diseased. Chloride of lime, not fasting, brought deliverance from cholera; the cure for pauperism lay in education and housing, not prayers and exhortation. Even clergymen were beginning to think habitually in terms of pragmatic goals and environmental causation. It would not be easy to recapture the piety of an earlier generation, preoccupation with material means meant, inevitably, the decreasing reality of spiritual ends.

Moralism is an essential part of the cultural debris left behind by receding waves of piety. Cholera was, in 1866, still made to serve morality’s didactic purposes. The concept of predisposing causes remained part of the theoretical armamentarium of almost every physician, despite the increasingly empirical nature of etiological thought and the correspondingly complete acceptance of the idea of disease specificity. Drink and immorality, as well as foul water and dirty bodies, might be recast as a new form of anxiety. As one clerical editorialist put it, the Christian had “not only his own salvation to secure, but he is to be an instrument of the salvation of others. To this end he is bound to enlist in every cause calculated to ameliorate the condition of man, and ultimately to contribute to his eternal peace. . . .” J. M. Bailey, Morning Star (Dover, N.H.), XXIV (July 11, 1849), 24. It is apparent that the improving zeal of the Benthamites—even of freethinkers both in England and the United States—was religious in a more than metaphorical sense.
1866

sponsible for contracting cholera. Poverty might not be all one's own doing, but it was nevertheless a condition somehow suspect; the poor were still outside society.

Traditional values were not so easily discarded; conventional morality condemned explicitly the grosser manifestations of American materialism. As temporal considerations assumed an ever larger role even in clerical preoccupations, ministers attacked with increasing intensity the vulgar and antisocial behavior exhibited everywhere about them. Only a few fast-day sermons in 1832 dwelt on the nation's prevailing materialism; by 1849, it had become an almost obsessive theme. In 1866, jeremiads directed against the moral enormities of postbellum America had become everyday editorial fare. At the same time, and often in a neighboring column, readers were presented with articles on cholera, paragraph upon paragraph detailing the proper manner of disinfecting privies, but not a word on sin and retribution.

It was in America's great cities that the realities of this new society were most apparent. They could not well be ignored. The Irish, for example, worked in one's kitchen, brushed past one in the crowded streets. They, like the Jews, were identified with city life and hence served as a visible—-and almost physically irritating—-symbol of change.

As the piety and confidence

It is possible, though by no means necessary, to assume that the peculiar intensity of such attacks was a result of the guilt and ambivalence produced by the speaker's own participation in the process of change he deplored. See the interpretation of Jacksonian rhetoric by Marvin Meyers, in The Jacksonian Persuasion (Stanford, 1957), or the emphasis placed upon the Protestant heritage of guilt by Stanley Elkins in his interpretation of abolitionism, Slavery: A Problem in American Institutional and Intellectual Life (Chicago, 1959). Though perhaps indispensable to the writing of social and intellectual history, I find the conception of a "collective consciousness" upon which such interpretations must be based somewhat unsatisfying (particularly as far as the collective consciousness is motivated by the promptings of an unconscious that conforms neatly to the patterns assigned the individual personality by modern dynamic psychology). In any case, and on a purely objective level, the obvious antipathy of Gilded Age morality to traditional Christian values was sufficient cause for such attacks—-especially by a ministry that felt more and more its displacement from the central position that it had, or imagined it had, held in the past.
of an earlier day declined, the presence of such alien groups seemed all the more alarming.\(^8\)

How long could the United States be spared the class strife of urban life in the Old World? The Astor Place riots in 1849, the Draft Riots of 1863, might be a mere foretaste of things to come. Only Christianity, traditionalists asserted, could bridge the gap between opposing classes; by 1866, even this seemed inadequate. The rich and poor living together in great cities found in their physical proximity a constant reminder of the social and economic distances which separated them. The wealthy, unable to find an assured social identity in the institutional stabilites of an earlier day, felt threatened from below. The poor, on the other hand, found in their contacts with the wealthy a recurrent exacerbation of natural discontent.

But cities could not be rased; civilization could not be effaced. The creation of the Metropolitan Board of Health was a recognition of this fact. (Primitivism has won a few theoretical points in its enduring conflict with progress, but has, at least in the United States, been defeated in every practical engagement.)\(^9\) The writers of the statute creating the Metropolitan Board of Health felt no doctrinaire desire for the natural culture of nineteenth-century America. They sought rather to use the resources of that society to end what they felt to be its needless waste of human life. The culture that produced New York’s slums, produced as well the disinfectants, the telegraph, the scientific insights, employed by the Metropolitan Board in its fight against cholera.

Increasing complexity in social and economic organization

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\(^8\) The Jews, for example, as an older millenial view declined and as the evils of materialism seemed to increase, became increasingly the object of American dislike.

\(^9\) To Thomas Jefferson or Benjamin Rush, city life threatened equally men’s health and virtue. George Rosen (“Political Order and Human Health in Jeffersonian Thought: Bulletin of the History of Medicine, XXVI (1951), 32-48) has clearly delineated the contrast between this Jeffersonian view and the convictions that later replaced it, notably, the assumption that cities and factories could not be done away with and that man’s duty was to work within these conditions in order to ameliorate their worse features.
demanded a corresponding expansion in the tasks of public administration. The casual arrangements with which New York had opposed cholera in 1832 and 1849 were no longer adequate in 1866. New knowledge and new convictions had made necessary the creation of a public health board with both greatly increased responsibilities and the authority to fulfill them. Yet the matter-of-fact authoritarianism of this new health board’s operations was still, in 1866, the exception rather than the rule in urban administration. Unlike other organs of municipal government, the board was able to provide an absolute justification for its dictates in their identification with the prestige and authority of science.10

Scientific values and habits of thought had assumed a new prominence in the American mind.11 By 1866, the ordered rationalism still characteristic of consciously formal thought in 1832 had been largely replaced by an unashamed empiricism, not only in medical writings, but in sermons and editorials as well. Stylized arguments and formalistic habits of rhetoric were more suited to a stable graded society, for they provided at once symbol and justification of social stratification. Such distinctions seemed to have no place in the United States in 1866. Membership in a profession, education, not even the perquisites of birth, guaranteed a secure social status. For a number of reasons, the material success that had replaced these older values as a source of social standing could not, in this new society, provide the inner security they had.14 In the first place, the acceptance of material success as life’s ultimate goal offended deeply held ideological commitments: few Americans could escape the conviction that man’s highest concerns were spiritual rather than material. (The United States

10 Such arguments, as has already been noted, did not appeal to the lower classes, who took the divine right of science with a grain of salt.

11 I use, of course, using the word “scientific” as a shorthand symbol for a spectrum of ill-defined—though related—values and habits of thought.

was, of course, committed to an ideology that rejected explicit class distinctions.) Second, the acceptance of material standards of success in an open society meant that the wealthy possessed in their riches no guarantee of status: their success could, and was, being duplicated by others. With each assertion of their own position, prosperous Americans became increasingly uneasy, their affirmations more and more blatant. Here, it would seem, were conditions that might nurture class warfare, even revolution; the fear of such strife was very real in American minds in the generation after Appomattox.

Yet the fabric of American society remained—essentially—intact; America’s political institutions had, by 1914, become far more responsive to the conditions of a new industrial society. This is the great accomplishment of the generation that governed America in the first dozen years of this century. The discovery of political techniques appropriate to the ordering of this new society, and the assimilation of these techniques into the pattern of existing governmental institutions, was a task far more complex than the comparatively simple one of preventing cholera.

Progressivism was, if anything, a strategy for the achievement of ordered social change. Many Americans had become convinced that some adjustments would have to be made in the forms of the nation’s political life; few, however, wished to alter the essential structure of American society. The problem then was to find the means through which these necessary yet limited changes might be effected. A solution was quickly found: the values and techniques, the habits of mind, produced by a scientific, industrial society constituted a natural implement with which to formulate and to accomplish such social change. Expertise, efficiency, disinterested inquiry were the means by which social injustice might be approached—not as an indictment of American society as a whole, but as a series of specific solvable problems. Few men in the age of Theodore Roosevelt doubted that science could provide the men and the methods with which society might be understood—and con-
trolled. From the optimism implicit in this faith stemmed much of the motivating enthusiasm and that peculiar esprit so characteristic of progressive America.

The means, it seemed, had been found through which the nation's institutions might be made to conform at once to the older ideals of justice and charity and to the newer values of science, efficiency, and productivity. To many Americans these newer means had not only achieved a status equal to that accorded the traditional ends of American democracy—they had become indistinguishable.

It has, in the years after 1945, become increasingly apparent that such distinctions can and must be made.