

## “Small Matters”: Benjamin Franklin, Philadelphia, and the “Progress of Cities”

**W**HEN BENJAMIN FRANKLIN DEBARKED at Philadelphia in 1723, he entered a pleasant and open town.<sup>1</sup> True, contrary to William Penn's wishes expressed forty years before, wharves had been built along the Delaware River, a street had been laid out along the lower bank, and new streets and alleys had been cut through the large blocks of the original town plan. Yet the town proper stood on the high bank, still in possession of splendid vistas across the broad river. Founded in 1682 and nearing the end of its first half century, Philadelphia presented to the young printer a mixture of residential and commercial buildings, and, within the mix, open spaces, both public and private. Shops and light industrial activity (bakers, chandlers, soap boilers, and coopers) stood amid larger enterprises, including tanyards, a brewery, and a slaughterhouse.

Franklin's new home was a dynamic, growing town, following the urbanizing tendencies of the time. As in England, cities in the colonies had begun during the late 1600s to experience the slow, steady urban growth that was to mark the eighteenth century.<sup>2</sup> Boston and New York, older by decades than Penn's settlement, had become towns by the third quarter of the seventeenth century, exhibiting distinctive social and cultural features and possessing economies significantly independent of agrarian interests. Physical changes had altered the

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<sup>1</sup> In the title, the reference to “small matters” is in *Benjamin Franklin's Autobiography*, edited by J.A. Leo Lemay and P.M. Zall (New York, 1986), 85 (hereafter, *Autobiography*); and the phrase “progress of cities” from Rev. Andrew Burnaby, *Travels through the Middle Settlements in North America in the Years 1759 and 1760* (New York, 1960), 56.

<sup>2</sup> P. J. Corfield, *The Impact of English Towns, 1700-1800* (London, 1982), 7-9 and *passim*.

sites, and civil works and services had been initiated that would not be needed in Philadelphia until the next century. Although the Long Wharf was not begun in Boston until 1710, major changes began before 1650, including the construction of the Sea Wall, or Out Wharves. Even considering the tasks of paving streets, putting up buildings, and filling marsh land, large-scale construction meant, for this seventeenth-century maritime settlement, docks and wharves.<sup>3</sup> The situation in New York resembled Boston's. Having begun paving its streets shortly after mid-century, around 1675 the city began to bring order to the problems of handling the refuse and waste produced by a busy, congested city center. Like Boston, New York by then had begun to order slaughterhouses and tanneries removed from the town.<sup>4</sup>

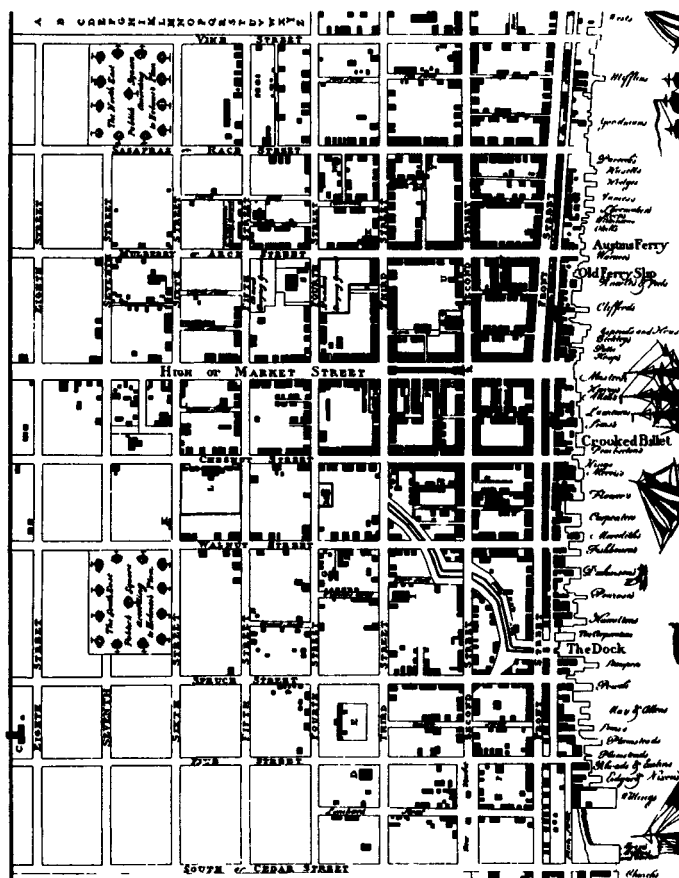
Philadelphia alone provides evidence enough of the tendencies to city growth in the English colonies, growing beyond 5,000 by 1700, easily passing New York. Rapid growth would distinguish it throughout the 1700s, swelling its numbers beyond Boston's by 1760. The long life Franklin would spend in the fastest growing English colonial town meant first-hand knowledge of what became the largest of the English-American cities. When the seventeen-year-old Franklin arrived in Philadelphia, the forty-year-old settlement was already experiencing the problems of density and development that had visited New York and Boston. Yet, arriving when he did, Franklin had the opportunity to observe that critical stage of a city's transition from town to city—a time when its problems became intractable and demanded amelioration.

Franklin's vantage point was not so grand as what the New York City council called, in 1793, the nation's "seat of empire."<sup>5</sup> For over sixty years, he observed Philadelphia from a series of residences and printing shops in a neighborhood marked largely by a small tidal cove and stream system to the south. The citizens having begun early to construct a cut along its northern edge, they named it the Dock

<sup>3</sup> Walter Muir Whitehill, *Boston: A Topographical History* 2d ed. (Cambridge, 1968), 10-15.

<sup>4</sup> Thomas J. Archdeacon, *New York City, 1664-1710* (Ithaca, 1976), 79-83.

<sup>5</sup> *Minutes of the Proceedings of the Committee, Appointed on the 14th September 1793, . . . [on] the Malignant Fever* (Philadelphia, 1848), 73.



FRANKLIN'S NEIGHBORHOOD, 1723-1790. Although published in 1762, Pennsylvania Surveyor-General Nicholas Scull did the survey for this map in the early 1750s. For nearly all his years in the city, Franklin lived either at Market and Second or, after 1761, along the upper stream between Chestnut and Market below Fourth. A half-dozen tanyards occupied the blank spaces along the Dock. Scattered about the city as well were the working yards of distillers, coopers, and blacksmiths. How much of the white space contained yards or was given to gardens and courtyards is not known. Courtesy of the Free Library of Philadelphia.

and made it the center of town.<sup>6</sup> Many of the shops and industrial establishments that Franklin walked past during his first days in his adopted city were along its banks.

Like most of the townspeople in the decades before the Revolution, Franklin never lived far from the environs of the Dock, and always on its watershed.<sup>7</sup> During the quarter century after Franklin arrived, between 1725 and 1750, the owners of businesses and residents built over a good part of the watershed. Structures practically covered the plat to Fourth, and they formed a corridor of development up High (Market) Street to Seventh, approximately following the upper stream system of the creek. Although the Dock's drainage area continued to contain the greater part of settled Philadelphia, the city had begun to expand along the Delaware.

By 1725, public market stalls split High Street down the middle between Second and Third streets. Churches and meeting houses joined residential housing, shops, and craft manufacturing yards to carry settlement north of High beyond Pegg's Run, a stream that flowed through the Northern Liberties, its course roughly paralleling Vine Street, the town proper's northern border. Before mid-century, by Franklin's own report, an area called Hell's Kitchen dominated a large portion of the northwestern quadrant—north of Mulberry (Arch) and west of Third. The area catered to residents and transients, especially sailors, seeking an active night life—although Franklin estimated that ten percent of the buildings throughout Philadelphia were public houses.<sup>8</sup> The government buildings begun during the thirties between Fifth and Sixth Streets sat at the very top of the headwaters of Dock Creek and at the edge of settlement.

Although he lived in Boston until his sixteenth year, and spent twenty of his eighty-five years in London and Paris, this single place, Philadelphia, shaped Franklin's ideas about the city. From the perspec-

<sup>6</sup> Gary B. Nash, "City Planning and Political Tension in the Seventeenth Century: The Case of Philadelphia," *American Philosophical Society Proceedings*, 112 (1968), 62.

<sup>7</sup> The following sketch of Philadelphia between 1725 and 1750 rests on numerous sources, including the records of the Assembly and the Corporation, John Watson's *Annals*, and several contemporary visual representations of the city, especially Peter Cooper's perspective of 1718-20, George Heap's 1753 map, and Nicholas Scull's 1762 map.

<sup>8</sup> "Presentment of Grand Jury," January 3, 1745, in Leonard W. Labaree et al., *Papers of Benjamin Franklin*, 28 vols. to date, (New Haven, 1959- ) 3: 109-112 (hereafter, *Papers*).

tive of its streets, footways, and water courses—Franklin's habitat—he experienced a growing city in which alternative notions of city form contended. Philadelphia's specific problems with environmental decline and congestion would, much later, color Franklin's thoughts on the future of the country, just as the character of the city during these years foreshadowed the fate of its physical and social landscapes in the centuries ahead.

Perceiving Franklin's relationship to this early American place is central to understanding his experience of the city and the ideas about city and country that appear in his writings after 1750. That he came to realize the importance of the local and concrete in his life is apparent in a story he related in his sixty-fifth year, in 1771, when he was beginning his autobiography. It took place around 1758, when Franklin and his son, William, visited Ecton, the village in Northampton where his father, Josiah, had grown up. Some of the older people talked of his uncle Thomas, who had remained at home. Like all the Franklin men, at least to four generations back, Thomas had trained in a craft. He was also "encourag'd in learning." Thomas Franklin became a scrivener, or public stenographer, and, being especially ingenious, gained the patronage of the local nobility. In his mature years, Thomas Franklin attained a position of importance in county affairs as "a chief mover of all public spirited undertakings." The story—and an awareness that Thomas had died on January 6, 1702, four years to the day before Benjamin was born—led William to remark that "one might have suppos'd a transmigration of souls."<sup>9</sup>

Examining Franklin's life during the forty years previous to 1771 suggests indeed that a transmigration of character might have passed from Thomas to his American nephew. Benjamin too trained as a craftsman and was clever, self-educated, and ambitious. His service as a clerk to the Assembly after 1736 and the esteem of well-placed patrons greatly aided his career. And like his Uncle Thomas, Franklin's reputation in 1771 rested largely on a long life of active involvement in local and provincial matters and on the promotion of public undertakings.

Franklin's activities on behalf of Philadelphia and his thoughts and observations about the future of settlement have often been discussed.

<sup>9</sup> *Autobiography*, 3.

Economists and demographers as well as historians have examined his predictions of population growth and his ideas about the relationship of cities to the countryside.<sup>10</sup> Yet they tend to ignore the grittier side of Franklin.<sup>11</sup> As Brooke Hindle noted in his essay on the origins and nature of the engineering mind, while historians have commented on Franklin's advocacy of emulation as a means of learning the art of composition, they have passed over his advice to artisans, that they practice emulation in mechanical design.<sup>12</sup>

The oversight extends to his role as a citizen, in which he is praised for his help in establishing public institutions like academies, churches, and hospitals. Discussion of his decades-long involvement in the world of city maintenance and infrastructure tends, however, to be brief and dismissive.<sup>13</sup> Correcting this oversight does not negate the superior achievements in science, invention, and national and international statesmanship. What is set straight, rather, are modern accounts that lack a regard for Franklin's strong sense of place, without which he cannot be fully understood.

Attention to the full spectrum of Franklin's life has never been more important than now, 200 years after his death. In an era when questions of environmental quality and urban form have raised concerns about land use and the primacy of private ends, the attempts by Franklin and his fellow citizens to regulate business, control industrial pollution and siting, and bring order to city services are of paramount

<sup>10</sup> See Alfred O. Aldridge, "Franklin as Demographer," *Journal of Economic History*, 9 (May 1949), 25-44; Lewis J. Carey, *Franklin's Economic Views* (1928); and Carl Van Doren, *Benjamin Franklin* (New York, 1938), 216.

<sup>11</sup> Carl Bridenbaugh's two volumes on the colonial city are notable exceptions: *Cities in the Wilderness: The First Century of Urban Life in America, 1625-1742* (New York, 1938) and *Cities in Revolt: Urban Life in America, 1743-1776* (New York, 1955).

<sup>12</sup> Brooke Hindle, *Emulation and Invention* (New York, 1981), 13-14.

<sup>13</sup> Biographies, ranging from Carl Van Doren's monumental biography, *Benjamin Franklin*, to Ronald Clark's *Benjamin Franklin, A Biography* (New York, 1983) to Esmund Wright's *Franklin of Philadelphia* (New York, 1986), are formulaic in their approaches and in the topics they cover. Van Doren's, while still the definitive biography if only because of its detail and the many, lengthy quotations, is distinguished more by volume and detail than content and approach. Clark concludes his discussion of the years to 1750 by listing Franklin's city concerns such as the watch, lighting, paving, and cleaning the city, and then writing: "More important, however, was the American Philosophical Society . . .," 52. Wright restates the old view that Franklin was without "aesthetic or passionate responses" to his world, 4, a view that Franklin's activities on behalf of Philadelphia refutes.

interest. In an era of preoccupation with international issues, his attention to home and neighborhood and city offers a powerful corrective. What we learn from viewing Franklin as city-dweller and citizen directly relates to our inheritance of a country which, as he accurately envisioned, would one day be crowded with inventions and people and cities.

During the 1730s, Franklin dealt with most of the urban issues that would engage him for the next thirty years. Just twenty-four years old at the beginning of the decade, Franklin emerged as an influential citizen through his work with the city: indeed, the city's physical condition and social character provided the stage and the prompts. While no inhabitant remained unaffected by the changes that took place during these years, no one articulated as clear and full a public response as did Franklin. He published books on the relation of environment to disease. He gave talks to the Junto—the conversation group he and friends started in 1727—on fire prevention and the need for a city watch. He used the *Gazette* to criticize the hubris of manufacturers who were polluting the city. And he sat on public works committees charged by the city Corporation or Assembly to produce engineering responses to problems like the polluted Dock or the need for improved transportation into the hinterland. All the while, Franklin was moving toward a deeper, more systematic understanding of the city, from which was to emerge a clearer vision of a balanced public order.

For Franklin, as for most residents of early Philadelphia, city problems were personal matters, arising out of immediate threats from fire and deadly disease. Disease became intensely personal in 1736 when Franklin's four-year-old son, Francis Folger, died of the small pox: forty years later, a new grandson led him to recall the loss of Francis, "whom to this day I cannot think of without a sigh." As with so much in Franklin's life, there was a public side to Francis's death. In a brief account published in his newspaper, the *Pennsylvania Gazette*, Franklin announced that, contrary to rumor, his son had not died from being inoculated. The fragile boy's inoculation had been delayed to allow him to recover from an extended illness. The four-year-old child had "receiv'd the distemper in the common way of infection."<sup>14</sup>

<sup>14</sup> "On the Death of His Son," *Pennsylvania Gazette*, December 30, 1736, *Papers* 2: 154; "The Printer to the Reader Wisheth Health," published with John Tennent, *Every Man his*

Franklin's first steps toward a systematic understanding of the city's problems came in linking environmental conditions to disease. In a book he printed in 1732 on medical practice by the Virginian, John Tennent, the twenty-six-year-old Franklin appended a note which indicated a clear understanding of the relation of disease to the environment. The Virginian's work applied to residents of the lower middle Atlantic states, Franklin explained, because, by the "lowness and moistness of their situation," they are "subject to the same kind of diseases" as are found in Virginia.<sup>15</sup>

Although surely referring generally to the marshy flats of the lower Delaware River, at the top of which sat Philadelphia, Franklin could have meant simply the area around the cove and streams over whose watershed the early town settled. While serving the town as utility and amenity, the hydrological properties of the small drainage basin, beset by dense patterns of settlement in the early city, was the focus of persistent complaints about standing pools of water and poor drainage.

During the middle decades of the century, Franklin and others demonstrated an ever-sharper environmentalist approach to disease. In 1744, Franklin helped John Mitchell, an Edinburgh-educated physician, naturalist, and map-maker who had settled in Virginia, circulate a brief essay on yellow fever. It won immediate praise in Philadelphia. Mitchell wrote Franklin the following year that he hoped to spread knowledge of the "nature and cure" of common diseases by showing their relationship to "our climate, minerals, vegetables, and animals."<sup>16</sup>

Franklin explained the relationship most succinctly in a 1773 letter on colds to the medical doctor, Benjamin Rush. Rather than dampness or coldness, it was "the putridity ["corrupt air from animal substances"] and miasmata" that caused colds.<sup>17</sup> Although he drew on

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*own Doctor* (B. Franklin, 1736, first published 1734) in *Papers*, 2: 155. For his remembrance of his son's death, see Franklin to Jane Mecom, January 13, 1772, *Papers*, 19: 28.

<sup>15</sup> "Afterword to *Every Man his own Doctor*," *Papers*, 2: 155. Making the connection was not unique to Franklin; see Richard H. Shryock, *Medicine and Society in America: 1660-1860* (Ithaca, 1962), 86.

<sup>16</sup> Mitchell to Franklin, September 12, 1745, in *Papers*, 3: 43; see also Franklin to Colden, September 13, 1744, in *Papers*, 2: 415.

<sup>17</sup> Franklin to Benjamin Rush, July 14, 1773, in Nathan G. Goodman, ed., *The Ingenious Dr. Franklin: Selected Scientific Letters of Benjamin Franklin* (Philadelphia, 1931), 155-56.

the erroneous idea that miasmas—vaporous exhalations given off by decaying matter—rather than microbes caused disease, his environmental approach amounted to correct public-health policy.

A similar progression appeared in Franklin's concern about threats to the city from fire. In the same year that Francis died, Franklin was forced to leap out of a window to escape harm from a fire. Such an experience could only reinforce public initiatives such as the proposals he made in 1727 in a talk to the Junto. He called for an organized response to the city's problems, and he described in detail the regulatory laws and additional city employees that would be needed to prevent fires and to achieve an organized and permanent city watch.<sup>18</sup>

In a letter on fire prevention in the *Gazette* in 1735, Franklin advocated actions that already had received public attention in the older colonial cities.<sup>19</sup> Addressed to "Mr. Franklin," he posed as a man too old and infirm to help his fellow citizens when fires break out, who thus offered "hints on the subject of fires" as his contribution. He began by advising residents in private homes to use caution in moving burning coals and other fuels through the house, then quickly shifted to the need for public action in a larger sphere. While talking "of prevention," he asked, "where would be the damage . . . [of] regulating" the various operations of businesses in which fires had been started.<sup>20</sup>

Franklin urged that bakeries, coopers' shops, and other fire-prone manufacturing activities be regulated. He wanted city government to prescribe the design of ovens, the storage of flammable materials and use of fire by coopers, as well as to specify the design and the materials used in the construction of fireplaces. Although charged primarily with the task of apprehending thieves and murderers and generally keeping the city clear of nighttime mischief, keepers of the watch were also to be alert to prevent fires.<sup>21</sup>

<sup>18</sup> *Autobiography*, 86.

<sup>19</sup> Bridenbaugh, *Cities in the Wilderness*, 55 ff.

<sup>20</sup> Franklin, "On Protection of Towns from Fires," *Pennsylvania Gazette*, February 4, 1735, in *Papers*, 2: 12.

<sup>21</sup> Franklin, "On Protection of Towns from Fire," in *Papers*, 2: 12-13, and editor's footnote, 12; *Autobiography*, 86-87; "Order of the Major and Aldermen Concerning the Constabulary and Watch," in *Papers*, 4: 327-329, and editor's headnote, 327, for a brief history of Franklin's and Philadelphia's long path to the establishment of an expanded and permanent watch.

The responses issuing from Franklin's pen ranged from brief reports on fires and accidents in his newspaper to presentments to the Philadelphia Grand Jury such as the one in 1744 in which he again called for the regulation of bakeries and coopers' shops and yards. By allowing "piles of faggots dangerously situated," the city officials ignored a known fire hazard. In Franklin's view, failure to regulate these activities was "dangerous to the city."<sup>22</sup> Although little came of these ideas for protecting towns from fires, Franklin successfully organized the city's first fire company, and in 1752 he and others organized its first insurance company, the Philadelphia Contributionship.<sup>23</sup>

The publisher had ample reason to shield his authorship of the *Gazette* article on preventing fires. Behind the passion that led him to ask "where would be the damage" in constraining private commercial interests was a realistic sense of the interests that motivated Philadelphia's leaders. Owners of business properties might readily see the value of a privately supported fire company and of insurance against losses. Maintenance of an enlarged constabulary, the detailed regulation of business and shop practices, the development of construction codes—all strained the leadership's conception of public responsibilities.

These initiatives by Franklin and others drew little support from the Quakers, who continued to control the Assembly, the locus of political power in the colony. They invested rather in their businesses, in land and lots, and in maintaining a style of life appropriate to what Frederick Tolles called "grandees." For most men who achieved wealth and power in Philadelphia, moreover, "retirement to the country was often the great goal, not the governing of cities or colonies."<sup>24</sup> Only after the mid-1750s would war lead the Quakers to remove themselves from power, finally allowing the concerted, if not the exact, response to the city's problems that Franklin had urged for so long.

<sup>22</sup> "Presentment . . .," January 3, 1744, in *Papers*, 3: 109-112.

<sup>23</sup> For a description of the Contributionship, see "Deed of Settlement of the Philadelphia Contributionship," March 25, 1752, in *Papers*, 4: 281 ff.

<sup>24</sup> Frederick B. Tolles, *Meeting House and Counting House: The Quaker Merchants of Colonial Philadelphia, 1682-1783* (New York, 1948); Gary Nash, "The Early Merchants of Philadelphia: The Formation and Disintegration of a Founding Elite," *The World of William Penn*, edited by Richard S. and Mary Maples Dunn (Philadelphia, 1986), 337-362, quotation from 350.

Understanding the relationship of environmental conditions to disease and fire prevention led naturally to alarm over the worsening state of industrial and domestic pollution in the city. A traveler from abroad like the Reverend Andrew Burnaby could casually associate the rapid growth he saw in Philadelphia with "the progress of cities." Yet residents experienced—and reacted to—the signs of growth on a more prosaic level. Few of Burnaby's abstractions appeared in 1739 when the residents of Franklin's neighborhood struck against the worsening state of the Dock. If the thirty-five-year-old printer had not already made his individualistic spirit perfectly clear, Franklin did so when he joined his neighbors in their petition to the Assembly in April.<sup>25</sup>

The petitioners declared the half-dozen tanyards around the Dock to be a nuisance—a term that implied the presence of contaminating industrial wastes—and asked that they be "removed from the city."<sup>26</sup> Whether or not Franklin signed the petition protesting the state of the Dock is unknown. But his residence in the neighborhood and the entry of the *Gazette* in the dispute in August makes clear his passionate interest. The influential and wealthy tanners immediately circulated a counter petition requesting the Assembly to postpone its deliberations until the tanners could prepare a defense. The Assembly agreed and did not return to the issue until August 27.<sup>27</sup> After hearing testimony from the contending parties, the Assembly ruled in favor of the protesters and then accepted all of the arguments and regulatory proposals of the tanners. That their right to exist at the center of town and to use Dock Creek as an open conduit for their wastes had been affirmed when the tanners paraded through the town. It was only then—and after their ally (and Franklin's rival), Andrew Bradford, editor of the *American Mercury*, published letters from the owners of the tanyards—

<sup>25</sup> A detailed account of Dock Creek and the development of the infrastructure to the Revolution is contained in A. Michal McMahon, "'Publick Service' versus 'Mans Properties': Dock Creek and the Origins of Urban Technology in 18th-Century Philadelphia," to be included in a forthcoming book on technology in early America, edited by Judith McGaw.

<sup>26</sup> *Pennsylvania Archives* (hereafter, *Pa. Archives*) 8th ser., 8 vols., (Harrisburg, 1931-1935), 3: 2487 (May 15, 1739).

<sup>27</sup> *Pa. Archives*, 3: 2490 (May 19, 1739).

that Franklin used the *Gazette* to defend the original petitioners' charges against the tanyards.<sup>28</sup>

Franklin's response is a remarkable document, clearly of his doing if not his full authorship.<sup>29</sup> Covering the entire first page of the August 16 issue, it falls into two parts. First, it provided a brief account of the occasion and then an argument for removing the tanyards, pointing to their polluting qualities and to more appropriate uses for the land. Second, a documentary report on the conflict included items from the tanners' letters and the Assembly debate, along with the entire resolution passed by that body. As on earlier occasions, the *Gazette* report appeared as a letter to "Mr. Franklin." Franklin used this editorial gambit to obscure his connection to political opinions that would surely upset the powerful tanners. Further, in the last sentence, Franklin was careful to say that he did not believe that the "Hot-Heads" who wrote the "Account of the Tanners" and celebrated victory would "be thank'd for it by some of their own brethren."<sup>30</sup>

Even with its disclaimers, Franklin's letter on the "affair of the tanners" was the clearest expression he had yet given to the assertion of public rights that lay behind the earlier calls for action on city problems. He was no disinterested protester. His residences and business properties in the area involved him personally and as an affluent citizen desiring to protect his investments—concerns common to all parties to the dispute. As a self-conscious city-builder, Franklin, perhaps more than his fellow citizens, saw the problems as inherent in unchecked growth, in what English traveler Andrew Burnaby termed "the progress of cities."

Since no one disputed the fact of pollution, Franklin focused on the physical conditions giving rise to the conflict. The extent of the yards covered the Dock Creek area with pits. Waste from the tanning process "choaked the Dock . . . with . . . Tan, Horns, etc." Tanyards negated the Dock's potential usefulness for fighting fires, and the

<sup>28</sup> For the tanners' letters, see the *American Weekly Mercury*, August 9-16, September 6-13; for Bradford's arguments, see the Postscript of September 13, 1739. Franklin's reply appeared in the *Pennsylvania Gazette*, August 23-30, 1739.

<sup>29</sup> See the criteria discussed in the introduction to J.A. Leo Lemay, *The Canon of Benjamin Franklin, 1722-1776* (Newark, 1986).

<sup>30</sup> *Pennsylvania Gazette*, August 23-30, 1739.

“masterings,” or animal wastes, gave off “offensive and unwholesome smells.” These conditions, he admitted, concerned him in part because they diminished the “Value of . . . Lots and Tenements” in the neighborhood. Yet businesses were hurt, too. Rather than attacking the liberties of tradesmen, as the tanners charged, he wished “to deliver a great number of tradesmen from being poisoned by a few, and restore to them the liberty of breathing freely in their own homes.”<sup>31</sup>

Franklin’s clerkship in the Assembly served him well in the newspaper debate. After quoting the tanners’ account of the Assembly’s action, he corrected their “false” report and printed a long extract from the minutes, which demonstrated “the direction of [the Assembly’s] resolve.”<sup>32</sup> But most of that was reportage. The real point was the argument for public rights. Franklin claimed the Dock was public property before Penn had made it so in the charter of 1701, even arguing that the street the tanners were sitting on—Dock Street—had been given “with the Dock for publick Service.”<sup>33</sup> More than abstract rights concerned him. Not only would the improvements to the grounds near the Dock make the land more valuable, but the removal of the tanyards would allow smoother passage through the town center, making it easier to fight fires. As for the tanners’ right to property, “there are, not very far from the town, places which might be as convenient to the tanners, and not so injurious to the city.” The restraints on the “liberty” of the tanners, who are “very few,” would be “but a Trifle” compared to “the damage done to others, and to the City.”<sup>34</sup>

Franklin’s attempt to remove the tanneries from the area of the Dock was perhaps his boldest urban act.<sup>35</sup> By 1740, Franklin’s city

<sup>31</sup> *Pennsylvania Gazette*, August 23-30, 1739.

<sup>32</sup> *Pennsylvania Gazette*, August 23-30, 1739.

<sup>33</sup> *Pennsylvania Gazette*, August 23-30, 1739; The Charter is reprinted in *Ordinances of the Corporation of, and Acts of Assembly Relating to, the City of Philadelphia* (Philadelphia 1851).

<sup>34</sup> *Pennsylvania Gazette*, August 23-30, 1739. For relocating the tanneries, Franklin had in mind Southwark and the area around Pegg’s Run to the north.

<sup>35</sup> Remarkably, even the editors of the most recent edition of Franklin’s papers, despite attempts to be comprehensive, have, along with several generations of editors, by-passed the masterful article on industrial pollution and land use that appeared on the front page of the *Gazette* in August 1739. Besides the *Papers*, major editions include those by William Temple Franklin, *Memoirs*, 3 vols. (1818), Jared Sparks *The Works of Benjamin Franklin*, 10 vols. (1840); John Bigelow *Complete Works of Benjamin Franklin*, 10 vols. (1887-1888); and Albert H. Smyth, *The Life and Writings of Benjamin Franklin*, 10 vols. (1905-07).

concerns included not only city lighting and the need for a permanent watch, but also the full range of administrative and infrastructural problems that he would struggle with through most of his adult life. And although the threat of disease from pollution had only been implied in the *Gazette* document, events during the 1740s fixed in the minds of the inhabitants the link between disease and the degraded state of the environment. Dr. Thomas Bond, a member of the city council and the city's leading physician, directly linked disease and the pollution of the Dock when he suggested that not so much "bark," or quinine, would be needed if the creek were covered over. Bond proposed that the "Nusance be removed" by filling in the water-course.<sup>36</sup>

It is difficult to conceive of Franklin remaining uninvolved in the environmental conditions of Philadelphia during the several decades before 1770. Throughout the period of rapid growth prior to the Revolution, when Philadelphia became the largest city in the colonies, problems with domestic and industrial pollution and congestion made the state of the city a prime issue. Probably the worst epidemic in the city's sixty-year history occurred in 1741, just two years after the debate over the tanneries and the Dock. Five hundred inhabitants and transients were struck down by yellow fever, the most feared of the several diseases that plagued the colonial cities. The next year, the city constructed a "pest house" on the south side of the mouth of the Schuylkill, which joins the Delaware a few miles below Philadelphia.<sup>37</sup>

The 1741 death toll reverberated through the decade, with the disease returning in force during the summer and early fall of 1747. Franklin responded in several ways. In a letter mailed in October to his mother in Boston, Franklin sent money for hiring a chaise for the winter, so she would "ride warm to meetings." He asked about the "sickness" in Boston that summer and reported that in Philadelphia,

<sup>36</sup> John F. Watson, *Annals of Philadelphia, and Pennsylvania, in the Olden Time . . .*, Enlarged . . . by Willis P. Hazard., 3 vols., (Philadelphia, 1877), 1: 215, 341; Benjamin Rush, who followed Bond as the town's leading physician, also linked the Dock to disease and argued that it should be filled in.

<sup>37</sup> Thompson Westcott, *A History of Philadelphia . . . to . . . 1854*, 213. Completed only to 1829, the partial manuscript was printed without pagination and never published. Page references are to the paginated, facsimile version in the American Philosophical Society, Philadelphia. For yellow fever in the colonies, see Shryock, *Medicine and Society* passim.

"besides the measles and flux, which have carried off many children, we have lost some grown persons, by what we call the *Yellow Fever*."<sup>38</sup> Toward the end of the year, Franklin discussed more broadly the "sickness that lately raged over this city and province" in a "Proclamation for a General Fast," which he wrote for the Governor's Council.<sup>39</sup> The Council adopted Franklin's draft mostly from a desire to defeat the province's enemies in martial combat. In the proclamation, issued December 7, Franklin gave equal attention to the "mortal sickness in the Summer past," asking guidance from Providence for "every undertaking that may be for the publick good."<sup>40</sup>

Such an undertaking included the project that he and an ad hoc committee of the Corporation began working on shortly after to restore the Dock. Created in mid-December of 1747, the committee was charged with recommending ways of restoring the watercourse and maintaining the area. Franklin was appointed with two other non-members and three aldermen. By early February, the committee had completed a report outlining steps to restore and maintain the Dock and suggested several means for raising the necessary funds.<sup>41</sup> The engineering proposals were detailed; they also displayed the breadth that Franklin was demonstrating in his electrical speculations at that time and had shown earlier in the decade in the design of the stove.<sup>42</sup> Franklin's broad approach complemented that of most other members of the committee, whose collective experience in construction and civil works projects surpassed his own.

Charged only with considering the portion of the Dock between the cove at Front Street and the Delaware River, the committee instead devised a plan that would restore the entire Dock all the way to Third Street. Common sewers would be extended and laid out in varied widths alongside the three- to four-block cut. Varied docking facilities would serve different functions for small boats, even leaving an open

<sup>38</sup> To Abiah Franklin, October 16, 1747, in *Papers*, 3: 179-180. (The italics are Franklin's.)

<sup>39</sup> Minutes of the Governor's Council, December 7, 1747, *Pennsylvania Colonial Records*, 5: 168-169, quoted in editor's headnote in *Papers*, 3: 227.

<sup>40</sup> "Proclamation," in *Papers*, 3: 228-229.

<sup>41</sup> "Report on the Swamp," February 24, 1748, in *Papers*, 3: 277-279, and headnote, 276-277.

<sup>42</sup> For brief accounts of Franklin's work with electricity, see Van Doren, 156-164, and for the stove, 141-142.

place on the bank for individuals unloading wood and materials brought in from the country. Regular dredging would enable water to cover the bottom, even at low tide.<sup>43</sup> The funding proposals would have a tax "laid on the city" to repair the public landing, extend sewers, and provide for dredging. Private owners would repair the docks fronting their properties.<sup>44</sup>

Franklin's contributions won for him a seven-year stint as a member of the corporation's governing body.<sup>45</sup> In October 1748, the common council elected him a member; three years later, the council elevated him to alderman. The common council formed, with the aldermen, mayor, and recorder, a governing group for the city. Aided by several employees and a good many workers under contract, the group oversaw all city services, planned for the expansion of public services and infrastructure, handled the problems presented by indigents and miscreants, and responded to perceived threats from Native Americans and European enemies of the colony and the crown.

In 1751, Franklin began a thirteen-year tenure as a member of the legislative body that held the most authority in both the city and the province. As with the Corporation, Franklin began his service as an Assemblyman months before election to membership when he joined a committee charged with planning a bridge for the Schuylkill. The group of six men were to propose a site for a bridge across the Schuylkill, somewhere along the western border of the town, and to submit "plans of bridges" to replace at least one of the ferries. The fate of the Dock Creek restoration plan devised three years earlier and the nearly two decades of discussion needed to achieve a permanent watch gave little hope that the "considerable subscription" required to build the bridge would be forthcoming.<sup>46</sup>

Even if it were a less visible and more specialized concern, Franklin's committee duty for the Corporation was of a piece with work he

<sup>43</sup> "Report on the Swamp."

<sup>44</sup> "Report on the Swamp."

<sup>45</sup> Headnote to "Common Council to James Hamilton and Reply," in *Papers*, 3: 327. *The Minutes of the Common Council* (Philadelphia, 1847) documents frequent attendance by Franklin at council meetings from 1748 to the 1760s. This modifies William Hanna's assertion in *Benjamin Franklin and Pennsylvania Politics* (Stanford, 1964) that Franklin stayed "outside the political order" until after 1751, 24. Nor, as this paper demonstrates, was he "unwilling to compete with the gentlemen who ruled the City", 26.

<sup>46</sup> "Report on a Schuylkill Bridge," August 20, 1751, in *Papers*, 4: 180-181.

had been doing since 1736 as clerk of the Assembly. For although he was "a good deal disengag'd from private business" and had taken in a partner so that he might devote full time to his research and experiments in electricity and agriculture, one occupation remained: in 1751, as had been true since the mid-1730s, Franklin found himself "fully occupy'd" with public business.<sup>47</sup>

After the bridge report, Franklin dealt with issues like the problem of stray and unruly dogs that plagued Philadelphia, and he helped write a bill which regulated the hire of carriages. In 1756, on the eve of his departure for England, he joined other Assemblymen to offer a successful "watch and lamp bill," fulfilling an old desire for a fully organized, permanent security force in Philadelphia. Less than a decade earlier the capital expenditures required for the bridge and Dock restoration were so high that the projects had been defeated at the proposal stage. The success of the watch bill represented an early, systematic step toward maintaining the physical city. Besides enhancing security, members of the watch reported on fires and violations of waste-handling. The implied level of commitment was promising in the face of the government's preoccupation with defense matters and ready involvement in undertakings like the founding of the Academy and a Charitable School.

The outcome of the ambitious attempts to undertake large public works mirrored related efforts to improve the infrastructure and establish comprehensive services. The few successes were obscured by worsening conditions in the city. Piecemeal attempts to provide for garbage removal and develop a drainage system of underground conduits and street gutters failed even to maintain the status quo, as distilleries joined tanneries in the area around the Dock. The massing of water wells and domestic and industrial waste pits across the settled parts of the city presented ever-expanding problems, not diminishing ones.

Meanwhile the conflict between the proprietor and the Assembly was generating the strongest political current at the time, a current Franklin would ride to leadership in Philadelphia and Pennsylvania.<sup>48</sup>

<sup>47</sup> To Cadwallader Colden, January 27, 1748, in *Papers*, 3: 271-273.

<sup>48</sup> For Franklin's rise in provincial politics in Pennsylvania, see Gary Nash, *Urban Crucible* (Cambridge, 1979), 266 ff, 282 ff. For Nash, of course, the city serves as a stage for politics rather than as an object of political concern.

In addition, Franklin helped meet potential attacks from land and by sea by successfully organizing and funding the military defense of the colony. Questions of defense and governance mainly occupied him while in England, paralleling his withdrawal from active involvement in city affairs. Nonetheless, just as these successes and his scientific achievements and writings were gaining him an international reputation, Franklin's established reputation within the city continued to elicit his service as a citizen. On his return from England in 1762, he was immediately drawn into the flurry of attempts being made in the Assembly to organize city services and to refine and expand the infrastructure.

The six years between late 1756 and 1762 that Franklin spent in England as an agent for the Assembly were absent of legislation or organizational initiatives to stem the decline of the physical city. Signs of renewal of city-wide initiatives appeared on the eve of his return. A first step to gain fuller control of the city's environmental problems came with the passage of a comprehensive act.<sup>49</sup> In part confirming Franklin's bold early proposals, the 1762 act also demonstrated the cost—especially with regards to the Dock—of not having acted earlier. The seven-year act designated means and priorities for cleaning and paving streets, alleys, and sidewalks; announced a program to expand the storm-water drainage system as the city grew; established a system of scavengers and requirements for removing sweepings, ash, shavings, and manure from the city; and instituted a tax and fee schedule to fund the attempt to bring order to the urban environment.

Franklin returned too late to sit on the committee that wrote the 1762 act, yet he joined committees in 1763 that dealt with related problems. Besides helping to prepare a bill to regulate wagoners, carters, and draymen in the city and a major bill to consolidate poor laws, Franklin worked on a bill to extend the 1762 act by establishing waste disposal regulations for manufacturing and industrial operations, as had been done earlier for the relatively benign household wastes. The supplement dealt with the dangerous contaminating refuse generated by manufacturing processes and arising from dead animals and organic garbage cast aside by individuals.

<sup>49</sup> "An Act for Regulating, Pitching, Paving and Cleansing the Highways, Streets . . .," passed March 26, 1762, *Statutes at Large of Pennsylvania*, 6: 196-214.

Also in 1763, he helped prepare another supplement to that part of the comprehensive act that dealt with Philadelphia's common sewers and watercourses, adding a proposal to clean and maintain the Dock.<sup>50</sup> The petition that spurred it had admitted the Dock was polluted and "in great measure useless," but urged that its former utilities be restored. They wanted to restore accessibility to small craft that carried firewood and building materials into the city, and they sought the return of its capacity for supplying water in case of fire. They wanted "the said dock, or creek . . . cleared out, planked at the bottom and walled on each side," which the committee's bill sought to do.<sup>51</sup> The result was precisely the opposite: by 1765, work had already begun on an arched conduit in the channel of the upper portion of the Dock, prior to covering it over.

All of the acts of the 1760s dealing with urban services and technology were incorporated into a comprehensive act of 1769, which replaced the 1762 act. Franklin's role in these achievements was clear. Whether in his early recognition of the relationship between disease and the environment, in his systematic approach to municipal administration, or in his widely recognized work on the stove and the properties of electricity,<sup>52</sup> Franklin demonstrated a penchant for holistic engineering design and systematic, spatially oriented thinking. He made analogies between the mechanical and the natural worlds, as he demonstrated in his story of the farmers who destroyed black birds that were eating their corn, without knowing the blackbirds also fed off the far more destructive worms. Thus Franklin advised that "whenever we attempt to amend the scheme of Providence, and to interfere with the government of the world, we had need to be very circumspect, lest we do more harm than good."<sup>53</sup>

By the acts of the 1760s, however, the Assembly's proceedings also gave evidence of the technological and ecological acumen within the community. Clearly, Franklin's associates possessed qualities of mind

<sup>50</sup> The second of two entries for January 28, 1763 (in *Papers*, Assembly Service, 4: 176), a "Supplement to the Act for Regulating . . ." dealt with the Dock.

<sup>51</sup> For the petition, see *Pa. Archives*, 6: 5384-5385 (January 24, 1763).

<sup>52</sup> See especially I. Bernard Cohen, *Franklin and Newton* (Philadelphia, 1956), and *Benjamin Franklin's Science* (Cambridge, 1990).

<sup>53</sup> Franklin to Richard Jackson, Albert H. Smyth, ed., *The Writings of Benjamin Franklin* (New York, 1905-1907), 3: 135, (hereafter, *Writings*).

similar to his. The engineering proposals and legislative initiatives embodied abilities comparable to those available in the inventive work of Robert Fulton and others during the decade and a half after the Revolution. As Brooke Hindle has shown, such initiatives were in the vanguard of a revolutionary approach to technology and organization.<sup>54</sup>

By further systematizing city services and infrastructure, the acts of the 1760s fulfilled Franklin's long-held desire that the city attend to the challenges of growth and expansion. By rejecting the Dock, however, the city retreated from the possibilities contained in earlier attempts to remove large-scale industrial operations from the city core and to re-establish the Dock as a public amenity.

Franklin's long involvement with city affairs in Philadelphia could not have been fully satisfying. He had worked to achieve a clean and pleasant environment, yet he had witnessed the browning of Philadelphia's greenery and the growing stench of its watercourses, both manmade and natural. From one perspective, the comprehensive acts of the 1760s appear as progress against the steady degradation of the city during the years after 1730. For those who fought to save the Dock and to reclaim the center of the city for residences and small-scale crafts and retail shops, those acts capitulated to manufacturing interests and uncontrolled growth. The experience could not but color the ideas Franklin advanced after mid-century about the nature and future of cities and the countryside in the new world. It led him, indeed, to questions about the future of the country itself.

Franklin's speculations about settlement and city-country relations appear in a handful of documents. The first was *Observations on the Increase of Mankind, Peopling of Countries, Etc.*, written in 1751 and published in 1755. Besides other editions, it was reprinted in 1760 with *The Interest of Great Britain*, which reiterated some of the arguments about the place of manufacturing in an agrarian society. With two additional documents written after the Revolution—*Those Who Would Remove to America* in 1782 and a long letter to Benjamin Vaughan in 1784—these writings offered a coherent body of ideas about the key settlement issues facing the new country.

<sup>54</sup> Hindle, *Emulation and Invention*, 22, 29, 141-142.

His ideas about cities, manufacturing, agriculture, and population growth have been frequently described, praised, and condemned.<sup>55</sup> Yet seen as a commentary on a life lived intensely in old European cities and in the emerging town-cities of the colonies, Franklin's ideas reveal more than the mind of a remarkable demographer and a promoter of English expansion in America. His speculations amount, in fact, to a lament over the domination of private manufacturing and commercial interests in the city and the eventual triumph of settlement patterns a later generation would label urbanization. For the near future, Franklin envisioned a benign balance between city and country, with each supplying the economic and social needs of the other. As the nation settled the vast stretches of land that formed the American continent, agriculture would continue to drive the economy, and country values would shape the society. Given the land's ability to take up excess labor, to employ the masses of immigrants who daily arrived, along with those added by the "natural fecundity"<sup>56</sup> of the people, the numbers of people in America, Franklin reckoned, would pass England's population in a century.<sup>57</sup>

Behind the optimistic assertions about growth, however, lay an implicit pessimism about the results to follow in the long term. "So vast is the territory of North America, . . . it will require many ages to settle it fully," Franklin wrote.<sup>58</sup> Noting some years later that the people dispossessed from the land in England were gathering in the cities, he rejoined that it would be many years before America suffered similarly. The vast forests waiting to be cleared and "put in order for cultivating" would keep the nation sound "for a long time."<sup>59</sup> Not "till the lands are all taken up and cultivated [would] the excess of people, who cannot get land, want employment."<sup>60</sup> In these assertions, made thirty years apart, the import of Franklin's demographic projections consistently qualified his optimism. Admitting that the open land

<sup>55</sup> Besides the biographies, see William A. Williams, *The Contours of American History* (Cleveland, 1961), 93.

<sup>56</sup> Richard Jackson to Franklin, June 17, 1755, in *Papers*, 6: 75.

<sup>57</sup> *Observations concerning the Increase of Mankind, Peopling of Countries, etc.* (1755), in *Papers*, 4: 233 (hereafter, *Increase of Mankind*).

<sup>58</sup> *Increase of Mankind*, 225-234.

<sup>59</sup> Franklin to Benjamin Vaughan, July 26, 1784, *Writings* 9: 245.

<sup>60</sup> "Those Who Would Remove to America" (1782), *Writings*, 8: 611.

would serve as a vent for continued population growth only until "full settled," at which time an excess of people would overrun the cities,<sup>61</sup> he expressed his mixed feelings about the country's future. The negative tone was amplified by Franklin's traditional views on wealth and possessions, or "Luxury and Corruption," as an English correspondent expressed it.<sup>62</sup> A respect for country values frequently disturbed his urban loyalties, opening him to the traditional argument that the city contained the "rich and luxurious, while the country possesses all the virtues." Excessive consumption troubled him because the production of "superfluities" seemed useful only in providing employment for the industrious.<sup>63</sup>

The city acted as a magnet for the population: it was a center for technological and scientific activity; a setting for religious, political, and economic institutions; and a source of publications and information. Manufacturing contributed vitally to the magnetism of a Philadelphia or a London, since, as Franklin explained, "manufactures and trade" enhanced the city's ability to absorb the people rebuffed by a fully cultivated land.<sup>64</sup> Franklin judged this as positive only because the city might then serve as a warehouse for people when the land was fully settled. In his economic geography, hunters—Native Americans—required the most land; land used for pasturage needed somewhat more people; and a country of agriculturalists constituted only "a middling population." Imbalance occurred only in an economy that relied on manufactures. In such a country, he argued in *Increase of Mankind*, most people were employed in manufacturing "or they must be subsisted by charity, or perish."<sup>65</sup> Franklin understandably believed that America's prospect for a happy future rested on the availability of open, unpopulated land.

Franklin's intellectual journey began with a broad recognition of the relationship of disease and environment, proceeded to an acceptance of

<sup>61</sup> *Increase of Mankind*, 227-229.

<sup>62</sup> Richard Jackson to Franklin, June 17, 1755, in *Papers*, 6: 81.

<sup>63</sup> Franklin to Vaughan, July 26, 1784, *Writings*, 9: 245, 247.

<sup>64</sup> Franklin to Vaughan, 26 July 1784, *Writings*, 9: 245. See James T. Lemon, *The Best Poor Man's Country: A Geographical Study of Early Southeastern Pennsylvania* (New York, 1972), 220.

<sup>65</sup> *The Interest of Great Britain Considered with Regard to her Colonies . . .*, *Writings*, 4: 49 (1760).

technology and system as solutions to city problems, and, near the end, arrived at the implicit pessimism of his demographic projections. The historical progression in this account of Franklin as citizen thus moves from his city experiences to a dynamic vision of city and country faced with the certainty of urbanization. Linking the triumph of technology in the West during the eighteenth century and the achievement of a systematic infrastructure in Philadelphia during the 1760s with the implicit pessimism of Franklin's demographic projections reflects the historical development not only of the nation but also of physical Philadelphia during the last decades of the century.

The order achieved during the 1760s turned to disorder with the Revolution, leaving the legislation of that decade sitting like dead weights in the statute books. The physical city continued to decline, dramatized by the city's continuing, after the Revolution, the removal of the forest that remained in the southwest corner of Philadelphia, a removal begun by British soldiers—for firewood—during their occupation. Between 1782 and 1784, Philadelphia's leaders ordered the final flattening of the town site and the arching and covering over of the middle segment of the Dock between Walnut and Front streets.<sup>66</sup>

The links between experience and ideas within Franklin himself can be examined directly in his late writings, specifically in the sections of the *Autobiography* written in 1788 and the codicil Franklin added to his will in 1789. Coming at the very end, they strike a note of ambivalence. Franklin had framed his autobiography as a story of progress and positive achievement. Precisely for this reason, the judgments and omissions in the account of his earlier involvement with the city become all the more pertinent. While the slighting of his civic experiences by modern scholars is intriguing, it is of greater significance that Franklin too slighted his early accomplishments. In the portion of the autobiography written in 1788, Franklin dismissed his involvement with "public affairs" like the watch and lighting on the grounds that these were "trivial" and "small matters." Following a lengthy discussion of the solutions he had helped devise to meet Philadelphia's problems, he begged his readers not to censure him for drawing their

<sup>66</sup> Watson, *Annals*, 391, 213-214.

“attention to affairs of this seemingly low nature.” Again, he qualifies with a word, and confounds the qualification by comparing the importance of lighting, paving, and trash removal to the need for a young man to keep his razor sharp—which not only brought pleasure but saved money. Nonetheless, he ends by hoping that the story of his civic involvement would “be useful to a city I love . . . , and perhaps to some of our towns in America.”<sup>67</sup>

In light of the progressive view of his life as he presented it, it is understandable that he omitted mention of the Dock, one of the failures in a long life of civic success. How then to explain the fond telling, in the 1771 segments, of the story of Uncle Thomas Franklin of Ecton or the proud relating of his son’s jest that the old man’s soul might have passed on to Benjamin. Like the scholars, perhaps, the momentous character of the Revolution diminished Franklin’s appreciation of the years before. The evaluations in the *Autobiography* suggest as much.

More forcefully, however, the 1789 codicil to his will questions the credibility of Franklin’s dismissal of his early civic concerns. Franklin wrote the codicil at a time when a new environmental disaster was in the making in Philadelphia, to be felt strongest after Franklin’s death, between 1793 and 1797, when a fifth to a quarter of the population died from endemic and epidemic disease. Since the technical conclusion of that catastrophe was the building of the city’s centralized watering system, the codicil Franklin added to his will less than ten months before his death in April 1790 testified not only to his continuing interest in Philadelphia but also to the maturing of his persistent speculations about the relationships between nature, technology, and settlement.

Franklin’s codicil appears as a judgment on the city. It was, actually, a public document—later, in fact, being entered into the minutes of the Common Council. It had the qualities of an engineering report, presenting a concise picture of the roles of technology and ecology in the city’s decline. This appears not in the often-mentioned funds left to Boston and Philadelphia, to be invested by making loans to young men learning the technical skills of a craft or trade, but in his grasp

<sup>67</sup> *Autobiography*, 85-86, 108.

of the natural elements of the site and of the consequences of having ignored them.

Having decided that an earlier bequest to make the Schuylkill navigable was impractical, Franklin listed more urgently needed public works projects, including bridges, aqueducts, paved streets and footways, and public buildings. Chiefly, however, an aqueduct was needed to replace the polluted waters and starved hydrology of the watershed. As in 1748, Franklin offered an engineering plan to solve the problem, and this time he accompanied it with money. He recommended that

the city [bring], by pipes, the water of Wissahickon Creek into the town, so as to supply the inhabitants, which I apprehend may be done without great difficulty, the level of the creek being much above that of the city, and may be made higher by a dam.<sup>68</sup>

The problem existed because the city had been covered “with buildings and pavements” through the years. Dense settlement prevented rain from entering the earth and “renewing and purifying the springs” that fed the town’s wells. The water “must gradually grow worse,” Franklin warned, “and in time be unfit for use, as I find has happened in all old cities.”<sup>69</sup> His grasp of the hydrological character of the site, especially of groundwater systems, led him to link settlement patterns to the drying up and polluting of the city’s wells. As a historical and biographical fact, it was Franklin’s and his fellow citizens’ failed attempts to save the Dock and the pessimism of the demographic picture that led Franklin and the city leaders of the 1790s to advance pure technological solutions to ecological destruction and environmental decline.

Franklin’s watering plan nonetheless projected an image of how city-building would proceed. His engineering assessment and watering system design assumed dense settlement and pollution—no less than the Romans had, when they built aqueducts and tunnels to transport water because the water running in rivers and under ground had grown foul and polluted. This technological vision of settlement, complementing the dark side of his demographics, has been well borne

<sup>68</sup> “Codicil to Benjamin Franklin’s Will,” June 23, 1789, *Writings*, 10: 501-510.

<sup>69</sup> “Codicil to Benjamin Franklin’s Will.”

out. The shadow is considerably extended, moreover, when, against Franklin's reckoning that the watering project would be needed "at the end of the first hundred years," we place the fact that it was begun just ten years later.

Recalling Franklin's enmeshment in Philadelphia alters our understanding of the legacy he left to the nation he helped to launch. When Carl Van Doren found in Franklin's acts and ideas "a large new conception of the whole of American life,"<sup>70</sup> he referred primarily to national, constitutional and economic structures, areas about which Franklin had much to say, especially during the Revolutionary and early national eras. Yet from 1723 to 1790, he lived mostly the life of a citizen, committed—like his Uncle Thomas to Ecton and Northampton—to Philadelphia and Pennsylvania.

True, in the second half of his long life, Franklin entered a world of international science and politics, and he rose to power in Pennsylvania and to prominence in the proto-national politics of English America. This is the Franklin we know best. Yet attention to the decades of active concern for the physical setting in which he lived his life, attention to his pursuit of community order and the pleasures of social relations, must alter our view. Franklin's embedded cautions about the unchecked path to urbanization broaden our vision of the American landscape and patterns of settlement. Franklin's wider view of affairs must be reclaimed. In the diminishing of domestic concerns, of attention to small matters, resides the source of our present environmental dilemma.

*Philadelphia, Pennsylvania*

A. MICHAL MCMAHON

<sup>70</sup> Van Doren, *Benjamin Franklin*, 215.