

URBAN NEGLECT: THE ENVIRONMENT,
PUBLIC HEALTH, AND INFLUENZA IN
PHILADELPHIA, 1915–1919

Thomas Wirth
Binghamton University, SUNY

On October 10, 1918, three Sisters of the Immaculate Heart, working in conjunction with Philadelphia General Hospital, entered a house on Haverford Avenue to treat occupants recently stricken with influenza. They “found a sick mother with two sick children in the same bed, and in another bed three more, but all in the same room. The windows were closed tightly, and we felt that we could taste the fever.”¹ The sisters described countless encounters with the influenza virus throughout the greater Philadelphia area, an outbreak that public health officials proclaimed was “on the wane” on September 21, but raged ruthlessly through the city’s streets for two more months, leaving nearly 13,000 dead at its end.² The sisters had in their sick wards, “Greeks, Italians, Jews, Armenians, Negroes, Poles, and even East Indians,” highlighting the degree to which the disease cut across ethnic and racial lines.³ The epidemic knew no boundaries or rules, infecting the youngest and healthiest Philadelphians. An overwhelming number of the afflicted came from poor and working-class neighborhoods, largely populated

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by immigrants and African Americans, where overcrowded housing, limited sanitation service, and unsafe drinking water constantly threatened to undermine the stability of their urban environments. Bereft of the modern conveniences necessary to combat and contain the spread of disease, such as clean bed sheets and clothes, medicines, potable drinking water, and flush toilets, influenza moved unabated through their homes and neighborhoods.

Philadelphia's two-month long confrontation with influenza exposed the overwhelming inefficiency of the city's public health and environmental apparatuses and laid bare its inability to deal with an emergency medical crisis. Indifference, ethnic and racial intolerance, and miscommunication due to political disorganization blocked immediate and effective action, rendering the city virtually defenseless against a serious threat to its stability. The city's public health officials, were, of course, not responsible for bringing influenza to Philadelphia—a pandemic that circulated worldwide and claimed an estimated twenty to thirty million lives in 1918—nor could they have prevented the deadly contagion from penetrating the city's borders. They were, however, responsible for the system of public health management constructed during the 1910s, a system woefully ill-equipped to meet an urgent situation that demanded both a comprehensive plan for disease prevention and a massive mobilization of the city's resources. Abysmal environmental conditions and inadequate housing further aggravated matters. Upon a visit to the city's tenement district during the height of the epidemic in late October 1918, the Reverend William Berg, secretary of Philadelphia's Inter-Church Federation, observed “unspeakably filthy conditions” where “White and colored tenants, paying from \$7 and \$8 a month rental, are obliged to live in surroundings which a farmer would not tolerate for one moment in his cow stable.”⁴ Prominent housing advocates discovered ample evidence to suggest that the proliferation of both municipal waste and unsanitary living quarters intensified and prolonged the stay of disease, helping to make Philadelphia's per capita death toll the highest of any major American city during the great calamity.

Several historians have considered the deleterious effects of the influenza virus on Philadelphia, each offering a slightly different account of the city's response to the epidemic. In *America's Forgotten Pandemic*, for example, Alfred Crosby found that the American medical community's initial overconfidence in containing the spread of influenza created a false sense of security in many of the country's largest cities, including Philadelphia, and diminished awareness of the scale and scope of the disease.⁵ Jeffrey S. Anderson has contended that the city's corrupt municipal government, led by Republican mayor

Thomas B. Smith, failed its people who struggled valiantly to fend off the destructive effects of the flu.⁶ John Barry's recent narrative history, *The Great Influenza*, tells two stories, both of which reserve an important position for Philadelphia in the unfolding action. The first describes the undeniable human tragedy and suffering precipitated by the rapid spread of influenza around the United States, while the second enumerates how a "handful of extraordinary people"—mostly research scientists—transformed American medicine through the crucible of a lethal epidemic.⁷ Historians have generally concentrated on the formidable public health challenge presented by influenza and have discussed the process by which physicians, nurses, scientists, philanthropists, and civil authorities went about coping with a crisis that was well beyond their power to control. Surprisingly little, however, has been said about the impact, at this particular historical moment, of a more than minor conflict over disease prevention methods among Philadelphia's foremost public health advocates.

The germ theory of disease, which located the root cause of human infections within the body rather than within an individual's physical environment, had gained nearly universal acceptance during the first two decades of the twentieth century. But many sanitarians, who were primarily urban reformers and engineers, focused on the creation of technological enhancements to control environmental nuisances and hazards, such as air pollution and human waste, still argued that an individual's surroundings contributed to the cause and spread of infectious diseases. Sanitarians did not deny the efficacy of the germ theory and its concern for personal and interpersonal relations, but asserted that the environment was at least of equal importance in the maintenance of public health. By the same token, most public health officials, who were typically doctors, had immersed themselves in the bacteriological studies of biologists and epidemiologists. They adhered to the New Public Health, as described by Hibbert Winslow Hill in his 1916 book of the same name, which located the sources of infectious diseases and the routes of their transmission in harmful microorganisms that propagated and spread through human-to-human contact.⁸ Scientists attempted to discredit the idea that communicable diseases were spawned by unhealthy environmental conditions, believing that this view looked backward to the nineteenth century crusades against sanitation and ignored microbial theory.⁹ The historian Martin Melosi found a "schism in the public health community" during this period, "between those who believed that improving environmental conditions at the very least promoted health, if not prevented disease, and

others who asserted that disease vectors must be confronted through research and testing rather than through the old preventive methods.”¹⁰ The essay that follows discusses the depths of this schism as it appeared on the eve of the influenza outbreak in Philadelphia and the ways that it affected the city’s particular experience with the epidemic. The essay also addresses the influence of middle-class cultural attitudes on environmental policy in a socially differentiated urban setting and seeks to understand those attitudes in the context of shifting ideas about public health.

“Fit Men from Fit Homes”: Health and Behavior in the City¹¹

Throughout the 1910s socially conscious improvers, largely middle-class citizens, took to the streets to ameliorate the miserable conditions that existed in impoverished sections of Philadelphia. Reformers in the city were influenced by the likes of Jacob Riis, a muckraking journalist who in 1890 produced a series of photographic essays on New York City’s East Village tenements and sparked ubiquitous interest across the Northeast in the problem of urban degradation.¹² Riis’s work challenged middle-class Americans “to create a bridge that will carry us over safe, a bridge founded upon justice and built of human hearts,” one that would help secure America’s path to progress and resurrect its people and their urban environments from a deprived state.¹³ Improvements in waste removal technology and the quality of housing since the late nineteenth century buoyed reformers’ morale, but confusion over environmental responsibility attenuated those successes. As to the question of who should be held accountable for renovations to the tenements and slums—an issue that plagued the reform process and created ambiguity with regard to individual and municipal obligations—there was little consensus. The situation in Philadelphia was exacerbated by a dearth of leadership in the Division of Housing and Sanitation (DHS), the city agency that handled environmentally related problems. After James McCrudden, Mayor Thomas Smith’s appointed head of DHS in 1916, resigned a year into his tenure, the position went unfilled for months until McCrudden’s assistant, Michael Kelly, finally agreed to serve in a provisional leadership capacity in December 1917. According to the Philadelphia *Evening Bulletin*, for nearly a year Kelly assumed the duties of three separate positions: acting chief of DHS, assistant to the chief, and head of the sanitation department.¹⁴ Lacking resources and support from city government, Kelly’s agency had only limited

ability to counteract environmental maladies, especially overcrowded and crumbling tenement and apartment buildings, that persisted in many of Philadelphia's poor and working-class neighborhoods.

It was not mere coincidence that during this uncertain period at DHS, from the time McCrudden was appointed in January 1916 until the last four months of 1918 when the epidemic struck, that mortality rates in several major disease categories were on the rise in Philadelphia. African American migrants from the South flocked *en masse* into ramshackle dwellings as they attempted to find jobs in a prosperous economy sustained by the onset of World War I. Overcrowded conditions combined with a lack of oversight from DHS to produce serious public health risks for the feeble and infirm, as well as for healthy workers. Among African Americans, scarlet fever, whooping cough, influenza, and tuberculosis of the lungs all experienced noticeable increases between 1915 and 1918.¹⁵ Even typhoid fever, an ailment rapidly on the decline in predominately black neighborhoods in Philadelphia in the early twentieth century, climbed slightly during these years. The coming of U.S. involvement in World War I and the influx of African Americans to northern industrial centers hardened reformers' resolve to prohibit disease from invading urban areas—a necessity for the consistent production and flow of goods in war. They pressured government leaders to remedy the unsanitary conditions in working-class districts that were, at least putatively, detrimental to the health of potential soldiers and the country's overall level of "preparedness." In Philadelphia, however, a philosophical split between the city's reformers and its public health officials obfuscated any collective attempt at evincing a well-developed plan for disease prevention.

The larger public health community in the city, including doctors, scientists, sanitary engineers, and reformers (or social engineers), could agree in principle that the conditions governing a person's environment, that is, the relative strength or weakness of familial bonds and the particular state of one's physical surroundings, had everything to do with the development of a person's character, moral temperament, and potential as a citizen. An ardent exponent of the link between environment and behavior, the eminent pragmatist and philosopher John Dewey observed in 1916 that, "the particular medium in which an individual exists leads him to see and feel one thing rather than another" and "thus it gradually produces in him a certain system of behavior."¹⁶ The behavioral approach to environment structured middle-class and elite thinking on the peculiarly urban dilemma of how to weave increasing numbers of disparate peoples, particularly immigrants and African

Americans, into the social fabric of American society. The logic of Progressive environmental reform hinged upon a basic supposition: if the unfavorable environmental conditions that many poor and working-class people lived in could be mitigated, then assimilation and social regeneration could proceed without impediment. But this was no simple task, opined a July 4, 1917 editorial in the Philadelphia *Public Ledger*, as “People may live in their own houses and still be envired by filth and rags because they have not been trained away from deplorable habits...It is not easy to impress on those who acquiesce in squalor the significance of flies and litter and damp cellars and windows hermetically sealed.”¹⁷ The behaviorist maintained that, if properly led, people would readjust their conduct to agree with a higher set of social and moral standards. There was considerable disagreement, however, as to the most appropriate means of motivating people to meet those standards.

Philadelphia reform groups, mostly privately funded relief organizations such as the Octavia Hill Association and the Charity Organization Society, sparred with the architects of the city's public health policy over the proper course for urban improvement. Private reform associations lobbied tirelessly for the removal of trash in the streets, the extension of modern sewer systems into environmentally distressed neighborhoods, the renovation of tenement homes, and an end to overcrowding. Public health officials in the city, unable to clear political and fiscal hurdles, typically ignored the environment in practice. They instead preached education as a way to instill the values of the New Public Health, in which individuals, armed at a minimum with rudimentary knowledge of the germ theory, could protect themselves from the major causes of disease and eventually change the unhygienic personal habits that presumably conspired against a vigorously healthy physical and social environment. Confident in the new science, which had all but eliminated sanitary environmental factors—dirt, uncollected garbage, poor ventilation, stagnant water, or noisome smells—as a culprit in engendering disease, to say nothing of its circulation, Philadelphia's municipal health experts avoided the external conditions that kept many of the city's residents living in utter squalor.

The laissez-faire approach to public health created problems for a small public health agency like the Division of Housing and Sanitation, which was established for the express purpose of exerting influence over the city's filthiest districts. DHS lacked the necessary support to prescribe and enforce environmental regulations—indeed, it even lacked a willing administrator—

and consequently received only cursory attention from its parent organization, the Department of Public Health and Charities (DPHC). As Philadelphia's central public health bureau, the DPHC set municipal health codes and had the power to levy penalties against violators, but in reality spent very little time on the latter. The DPHC walked a fine line in its role as protector of public health. It could not push the issue of sanitation and housing reform too hard for fear of rubbing up against private contractors and prominent property owners who had political ties to Mayor Smith, as well as to the city's two most powerful, however unscrupulous, politicians from South Philadelphia, state senator Edwin Vare and his congressman brother, William. In addition to his duties as a politician, Edwin Vare also doubled as the city's largest private contractor and, not coincidentally, had arranged the most lucrative street cleaning deal in all of Philadelphia in 1917 and 1918. On the other hand, the dilapidated state of the city's infrastructure and pressure from reformers worried about the astonishing growth of overcrowded and unsanitary homes warranted the Department's immediate consideration.

DPHC director Dr. Wilmer Krusen attempted to forge a middle path between Philadelphia's crooked political system and escalating anxiety over the stability of the city's urban environment by using the New Public Health, with its emphasis on personal accountability and the suppression of contagious microorganisms, to shield the Department from environmentalist critics. Krusen publicly urged citizens to familiarize themselves with modern medicinal remedies and the basic rules of personal hygiene and, once the influenza epidemic struck, directed the bulk of the DPHC's initiatives through the newspapers and through wide-scale distribution of leaflets and pamphlets. Public education campaigns represented the most effective way of eluding onerous health service programs, including inoculations, quarantines, and city-wide clean-up initiatives, that threatened to take workers away from their main task as producers and were, more to the point, beyond the means of the DPHC's budget. Krusen understood the importance of balancing public health with the city's desire for a robust economy. It was much less controversial for health authorities to pass sanitary responsibility on to the individual citizen rather than to press the politician to open up his coffers. Empowering individuals with knowledge, in an attempt to foster behavioral transformation, safeguarded both the municipal health official and the politician from accusations that they were not doing enough to improve the urban environment. Persistent warnings from reformers connecting the wretched conditions in tenements and apartments, antiquated sewer systems, and a

lack of fresh water with the spread of disease regularly went unheeded by Krusen and the Department between 1916 and 1918. In Philadelphia, the perceived political and economic costs of extensive public works projects far outweighed any anticipated social and moral benefits that they might have reaped from them.

The DPHC's indifference to environmental problems, however, did not deter one of the city's premier reform groups, the Philadelphia Housing Association (PHA), from its mission "to fight disease right at home while the American armies are fighting at the front."¹⁸ A generation after Jacob Riis's initial New York tenement study, PHA reformers helped perfect his method, coupling photographs that depicted abominable living conditions in the tenement and slum districts of Philadelphia with empirical data, such as statistical reports on deficient plumbing or defective roofing, and neighborhood surveys. As a private charitable organization, the PHA worked in conjunction with the National Housing Association as well as with local government, but operated independently of both.¹⁹ From its inception in 1909, the PHA focused primarily on drafting environmental regulations—despite not having the capacity to enforce them—for the poorest and most ethnically diverse sections of the city, particularly the areas to the immediate north and south of the city's downtown core at Market and Arch streets. The PHA fought for the alleviation of pollution, in the air and on the streets, and campaigned for neighborhood clean-ups and the construction of new housing. Although the Housing Association theoretically cooperated with the DPHC in the 1910s, during the war years the two organizations clashed over the direction of the city's public health agenda. The PHA's chief administrator, secretary John Ihlder, blamed Wilmer Krusen for the insufficient leadership at the Division of Housing and Sanitation and chastised the DPHC publicly both for its inspectors' inattentiveness to prevailing sanitation laws and to the environmental assessments compiled by the Housing Association staff. A frustrated Ihlder noted in June 1917 that, "If only the board would look into all our reports they would have their eyes opened...In all probability many of our reports do not receive much attention."²⁰

Ihlder and the Philadelphia Housing Association subscribed to the reform philosophy elaborated by the authors of the 1908–09 Pittsburgh Survey, an influential Progressive Era critique of industrial society that found a correlation between urban environmental conditions and human behavior. The Survey, as historian Joel Tarr noted, made an "environmental statement" about the "discrepancy between industry's use of extensive planning and

expertise in the name of production and profit, and the limited attention paid to housing, social, and sanitary conditions in Pittsburgh working-class neighborhoods.”²¹ Logically, the deteriorating neighborhoods where workers lived and were deprived of modern sanitary conveniences fostered the moral or social deficiencies of those neighborhoods. Survey investigators asserted that human ingenuity and technology could conquer the social problems brought about by industrialization and that a restructured urban environment could induce positive changes in the behavior of poor and working-class people. PHA inspectors shared a similar faith in the human capacity to modify the urban environment, particularly for the benefit of a society at war. As “Students of housing conditions,” an August 1917 editorial in the *Public Ledger* declared, Ihlder and his staff are “thoroughly aware of the direct relation between the house and the occupant.” The editorial continued, “the need for the creation of an army has provided an opportunity not likely to occur in peace times for finding out about the ‘human wastage’...[and] the direct connection between the dwelling and the personal efficiency of the workmen.”²² The PHA amassed empirical evidence that demonstrated how unhealthy conditions spawned immoral and deviant behavior and collectively stunted the development of the nation’s “fighting force.” Inspectors used the data subsequently to agitate for the eradication of environmental evils—as the harbinger of social evils—and the introduction of modern waste disposal systems and new housing into the degraded Philadelphia neighborhoods where the American military culled a portion of its enlistees.

Paternalistic attitudes toward reform, however, no doubt reduced some of the potency of social improvers’ apparently benevolent objectives. Underlying the worldview of the middle-class health official and the reformer was a basic assumption about the people that they were attempting to change: the germs and dirt that permeated slums and tenements were prevalent not because of abject poverty, but because of ignorance, stemming either from inadequate language skills or a person’s ethnic or racial makeup. City health officials, such as Wilmer Krusen, contended that if they could eliminate the inherent provincialism that precluded foreigners and African-Americans from assimilating normative social and behavioral patterns, ridding them of their parochial notions of cleanliness and hygiene and inculcating a sense of self-help and individualism, then social and moral progress might take hold organically as old (and bad) habits dissipated. Conversely, many housing reformers like John Ihlder argued that precisely because such a strong connection existed between moral corruptibility and a defiled environment, outside intervention in the

form of better housing, sanitation, and water services, as opposed to internal deliberation or self-help, were essential to altering the immoral or unsavory behavior of the tenement resident. Both groups regularly overestimated the importance of cultural difference to the neglect of paralyzing social and economic forces, and they at least partially undermined their own best intentions by associating perceived racial- and ethnic-based behavioral tendencies with the erosion of urban society.

Prelude to Catastrophe: The Housing Association and the Urban Environment

Philadelphia Housing Association inspectors were essentially grass-roots activists for urban environmental reform. Although they prejudged the behavior of the inhabitants of poor and working-class neighborhoods without closely scrutinizing individual circumstances and exaggerated the link between moral vice and the environment, they nevertheless understood the dire public health situation created by the city's innumerable environmental and sanitation problems. In the interest of making the depth and severity of environmental decay in the city a matter of public concern, PHA agents conducted thorough neighborhood surveys, usually using the city's political wards or districts as boundary markers. They registered the frequency of unhealthy conditions that existed in tenements and apartments, the reasons for those conditions, and the prospects for rehabilitation. Secretary Ihlder's alacrity with the media coupled with the zealotry of muckraking journalists, helped PHA inquiries routinely find a conspicuous place in the headlines of the city's major newspapers. Its reputation as a rigorous investigative body that applied contemporary scientific methods—observation, comparative analysis, and careful reflection—in its sociologically-based surveys, also earned Ihlder the ear of the army's surgeon general, William Gorgas, during the war.

The PHA dedicated a critical share of its resources to canvassing the political districts in South and Center City Philadelphia, where large numbers of Eastern and Southern European immigrants and African Americans lived. They worked in the seventh ward—encompassing a narrow corridor between South and Spruce Streets and from Seventh Street to the Schuylkill River—which housed the highest percentage of African Americans in all of Philadelphia's forty-seven political districts according to the 1910 census.²³

Inspectors also investigated the area immediately south of the seventh ward, in districts thirty and thirty-six, which also contained significant numbers of black residents. By 1920, the three aforementioned districts along the Schuylkill were home to more than thirty percent of the city's African Americans.²⁴ Although Philadelphia's foreign-born population comprised less than a quarter of the aggregate population in 1910 and 1920, the clustering of immigrant settlements into relatively isolated ethnic enclaves troubled reformers who hoped to break old world conventions and impart the message of an American Social Gospel that extolled the virtues of equality, community, civic engagement, and social and moral uplift. Nearly seventy percent of the city's foreign-born Italians lived within four contiguous districts in South Philadelphia, between South Street and Mifflin and Broad Street and the Delaware River, and just under half of its Russian and Russian-Jewish population resided within the same geographic quadrant in the southeast and south-central zones along the Delaware.²⁵ A swelling immigrant and African American population in Philadelphia worried students of environmental conditions for two reasons: overcrowding increased the risk of transmitting communicable diseases to neighbors and family members, while also posing a challenge to the urban assimilation project and the cultivation of a robust, healthy, and refined citizenry.

In 1915, during a 10-month survey of the seventh ward, four PHA investigators, one of whom was an engineer and another who was a plumber, reported 1,077 complaints related to nuisance, maintenance, sanitation, and building code violations on a total of 639 properties. Tenants within the district described structural flaws to their buildings, such as faulty roof drains, obstructed sewers and drainage outlets, illegal plumbing, and inadequate water supply. Other grievances focused on the dangerous conditions inside the home, including cellar living and sleeping, stagnant cellar water, damp rooms, dilapidated privy vaults, inadequate and malfunctioning toilets, and dirty walls and floors.²⁶ The inspector noted of the seventh ward, "while there are many pre-disposing causes for the high morbidity and mortality in this ward, yet there is no doubt in my mind that chief among such may be the unsanitary housing of the people, the lack of underdrainage, and the gross over-crowded living conditions in the alleys and courts."²⁷ The PHA submitted the seventh ward complaints to the Board of Health, the administrative overseer of the Department of Public Health and Charities, which then referred them to the respective municipal agency for repairs or closer examination. Out of the more than 1,000 complaints filed in the seventh ward

between January 1, 1915 and October 1, 1915, only 329 were deemed corrected by the PHA upon re-inspection, while 748, or roughly seventy percent, remained uncorrected. A 1914 health table supplementing the survey showed that, compared with the rest of the city, the seventh ward had a fourteen percent higher mortality rate per 1,000 people and a ninety-seven percent higher incidence rate of tuberculosis of the lungs per 100,000 people.

Over a year before influenza wreaked havoc on Philadelphia, housing inspectors reported "infants waddling about polluted backyard sewage pools, families without washing or drinking water, cellar-lodging rooms and other disease-breeding conditions of the worst type" in the tenements of South Philadelphia, less than a mile from the affluent Rittenhouse Square area.²⁸ A PHA agent remarked uneasily that, "Our very best neighborhood, only a short distance away from these places, may at any time be affected by diseases which originate in these run-down sections."²⁹ The Philadelphia *North American* wrote of inspectors' findings in the "negro district, where the sudden rush from the south has caused serious house overcrowding," in the "Italian district, where in five small houses they found twenty-eight children," and in the "Jewish district, where they found tenement houses which have no water above the first floor from 7 in the morning until 8 or 9 at night."³⁰ By the end of 1917, population pressures had clearly outpaced the appropriate number of facilities necessary to maintain equilibrium in the city. In its annual report, the PHA found 165 miles of streets in the city without access to sewers and 39,078 homes, mostly in South Philadelphia, still using the antiquated privy vault-cesspool septic systems that were periodically prone to overflow.³¹ As conditions grew worse in many neighborhoods, however, attention to environmental and public health ramifications declined. The PHA, for example, reported an increase in city-wide complaints to the Department of Public Health and Charities from 7,874 between January 1 and November 1, 1917 to 10,312 between January 1 and November 1, 1918. The increase in grievances was accompanied by a downward trend in follow-up corrections, from twenty-nine percent in 1917 to twenty-two percent in 1918.³² PHA inspection supervisor Annette G. McCall contended that the high death rates and infant mortality rates in Philadelphia's poor and working-class neighborhoods were directly related to an absence of vigilance in the city enforcement of existing municipal codes. She commented that, "if the city would more stringently enforce the law of sanitation much would be accomplished to benefit" the people of these areas.³³

The migration of black Southerners to Philadelphia, many of whom found jobs in the city's booming munitions and naval supply industries between 1916 and 1920, also seemed to confirm sanitary reformers' worst anxieties about social disorder. An August and September 1917 study conducted by the Housing Association considered the living conditions in 179 houses occupied by new African American migrants across the city. McCall, the study's chief investigator, observed what she believed to be a disturbing trend among the newly arrived—a disregard for "all laws of decency." In her survey she wondered, "In how many cases are the children learning standards of right living? How long will the community suffer for the lack of provision of adequate homes for these new comers in our midst?"³⁴ Documenting dozens of instances of illegal overcrowding due predominantly to a proliferation of single male borders, McCall suggested that black migration accelerated the disintegration of the family unit. She found that both "immoral living" and "lodger evil," which resulted from African Americans' fear of "strangeness and loneliness" and their "childlike love of companionship," signified a grave threat to the sanctity of the black family.³⁵ Secretary Ihlder presupposed McCall's conclusions in the *Inquirer* several months earlier, asserting that, "We do know that many families are now taking in lodgers for the first time and so undermining family life."³⁶ Equally noteworthy, Ihlder ominously warned that, "The increase of negro population at the rate of 500 a week and insufficient houses will make epidemics more probable and more fatal."³⁷

The PHA maintained that a war on infectious disease and social decomposition had to begin with the environment, confronting pollution and the shockingly unsanitary living that characterized many of the city's working class neighborhoods, tenements, and slums. Housing Association officials advocated four immediate remedies to the city's quagmire. First, inspectors urged city officials to coerce tenement landlords to clean up buildings and properties in crumbling neighborhoods by strengthening the enforcement of prevailing municipal code, and, in light of this demand, they also pressed for the addition of new inspectors to the Department of Public Health and Charities in order to bolster city authorities' presence in severely affected districts. Additionally, the PHA called for the construction of new homes to accommodate fluctuations in the city's population and to assuage the problem of overcrowding. In a meeting with the United States military's Surgeon General Gorgas, Ihlder relayed his concern that the reason drafted men in Philadelphia were being rejected for physical incompetence was due to the

city's unfavorable environmental conditions. Ihlder told Gorgas that, "Many of the men who are turned back by the examining surgeon today are victims of living conditions in earlier years that were not salubrious. They may have slept, as children, in rooms that were not properly aired. They may have been fed injudiciously by parents. They may have formed demoralizing habits."³⁸ More and better housing, Ihlder claimed, only increased the probability that these physical disabilities would wither away as families took pride in raising their children in a safe and clean environment. Finally, the PHA appealed to both Philadelphia councilmen and public health officials to begin a concerted clean-up initiative—including a flushing of streets and alleys where it was believed that germ-laden bacteria incubated—in the city's most congested districts. "A clean-up of such places...is absolutely essential to the health of the people of this city," commented Inspector McCall, adding that New York, a city three times the size of Philadelphia, has conditions that are "not to be compared with the situation here" because "Conditions there are many times better."³⁹

Recommendations for improving the urban environment were met, on at least two occasions, with dubious responses by civil authorities and by resistant property owners hostile to PHA scrutiny. For example, in January 1916, when shown the seventh ward housing survey and asked to cooperate in the effort to promote better living conditions in his district, councilman Charles Seger was reportedly "not sufficiently interested to make a reply."⁴⁰ A similar response was elicited from councilman John P. Connelly of the eleventh ward, a small district that hugged the Delaware River between Third Street and Vine Street and contained a majority of foreign-born residents, mostly of Russian and Russian-Jewish descent. Connelly's ward, like the seventh ward, had a higher death rate than the city average, and PHA inspectors attributed this to "the many nuisances afflicting the small wage earners who were so unfortunate as to have to live there."⁴¹ Both Seger and Connelly opposed building up the Division of Housing and Sanitation, the lone city agency that might have served as an antidote to their districts' problems, for the simple reason that DHS threatened to clamp down on delinquent property owners, many of whom supported their campaigns. Reformers' agitation for pork barrel projects, such as clean-up initiatives or stricter code enforcement, that potentially imperiled the property of key constituents gained little traction in districts in which firmly entrenched patronage networks existed. The PHA had some ability, however, to exert pressure on an individual basis, especially on those who were not friendly

with the ascendant political party, and pushed landlords to renovate and modernize their execrable dwellings. For instance, Albert B. Roney, the owner of three apartments on Lombard Street and the subject of multiple Housing Authority investigations, lamented to an inspector that “he greatly regretted that he had no influence with the present administration or he would put a stop to the ‘meddling’ of the Commission.”⁴²

Political obstacles and landlord resistance aside, Secretary Ihlder and the PHA faced a more immediate conflict of interest. In mid-September 1918, shortly before the influenza epidemic spread from nearby naval bases to the city proper, DPHC Director Krusen explained that, “since dust particles are the principle floating air rafts carrying these germs, whether dry or as the nuclei of infected, sneezed and caught spray, the imperative public aim should be the removal of pulverized poison dirt from our streets.”⁴³ Krusen agreed with environmentalists that dirty streets were sanctuaries for harmful bacteria, but he was more concerned with the origins of noxious pathogens and the kinds of behavior that led to their formation. A gynecologist by training, and a crusader against sexually transmitted diseases in the early part of his tenure at DPHC, Krusen was aware of the etiological pathways of common infections and the dangers of interpersonal contact between sick and healthy individuals. He therefore saw the PHA fight against squalor as secondary to the reformation of personal habits. Krusen relied on the sound science of the New Public Health as the influenza virus tore through Philadelphia, attempting to cope with an incorrigible adversary by teaching people about its means of attack. To outsmart the virus, held Krusen, citizens were to obey the basic principles of the germ theory, reducing the chances for bacteria to spread by paying close attention to individual and household hygiene. For those illiterate, poor, and working-class people unable to comprehend the science, Krusen’s suggestions were published in plain English in the city’s newspapers: “Remember the three C’s—a clean mouth, a clean skin, and clean clothes.”⁴⁴ Campaigns against spitting and personal cleanliness, while important, did precious little to resurrect the contemptible conditions that had festered for years preceding the spread of disease. Lost on Krusen and others at DPHC was the fact that epidemic-inducing circumstances that existed long before the influenza virus struck the city obstructed all opportunities to respond efficiently and effectively to any public health crisis, large or small.

The Collapse of the Urban Environment: Influenza Strikes Philadelphia

The Philadelphia medical community indicated that the influenza epidemic, which began in Boston in early September 1918 and moved to Philadelphia in the middle of that month, would be contained to the naval yards at Hog Island and Camp Dix, New Jersey, just outside of the city limits. On September 22, the *Public Ledger* reported that, "City health authorities, naval surgeons and practicing physicians declared that there was nothing alarming in the situation. While the spread of disease is not checked, it will be confined to enlisted men, among whom it was first noticed. With ordinary precautions the general public will escape, doctors believed."⁴⁵ The first stage of the epidemic in Philadelphia, from September 19 through October 5, was marked by supreme confidence in modern medical theory. A noticeable decline in infectious diseases such as tuberculosis and typhoid fever occurred in the U.S. in the early twentieth century, and although new viruses, like poliomyelitis, and old ones, like malaria, caused localized epidemics around the country, scientists and doctors had faith in their ability to isolate the specific causes of infections.⁴⁶ Still, epidemiologists were interested in tracking patterns for many communicable diseases and were therefore all too aware of the high morbidity and mortality rates that accompanied especially lethal viruses. What, then, prompted public health officials in Philadelphia to suspect that the pathogens that caused influenza, which were rapidly multiplying all over the country, could be contained so easily?

Two factors characterized the early period of the epidemic: persistent reassurance that the virus, although a particularly harsh form, could be kept from infiltrating the general public and confined only to military personnel, and secondly, a faith in public health officials' guidelines for disease prevention. On September 23, there were 600 known cases of influenza among the enlisted men of Philadelphia, forty of which were new cases for that day. This represented seventy-three fewer cases than on September 22, and Captain George Pickerel, head of Philadelphia's Naval Hospital, quickly claimed victory. He told the *Public Ledger* that, "The epidemic is diminishing slowly. Yes, some have died. But it is all working out as we anticipated from advices we received of the spread of the malady from Boston and New London, CT. There is no cause for further alarm. We believe we have it well in hand."⁴⁷ As a precautionary measure at the recommendation of army Surgeon General Gorgas, the city printed 20,000 posters warning residents of the dangers of promiscuous sneezing. "Improper sneezing spreads more germs than

probably any other human action," wrote Gorgas. The posters, for those who did not read English, pictured a dark-skinned man sneezing into a handkerchief and another man protecting himself from the potential spray.⁴⁸

On September 26, forty-seven civilian cases were reported in the city, thirty of which appeared in South Philadelphia. The high rate of co-mingling between the military and civilian population, especially doctors and nurses brought into the naval bases from the city to help with the quarantine of sailors and shipbuilders, made it extremely difficult to contain the virus. It became apparent fairly quickly in late September that the proclamations of the first week were overblown and that the epidemic showed no sign of waning. The death rate from all causes in Philadelphia for the week ending September 28 was 587, 173 more than that of the corresponding week in 1917.⁴⁹ But while this marked an appreciable increase in fatalities, it was not yet an alarming enough number to warrant a full commitment of the city's resources. The outbreak, by all interpretations, was manageable and repressible, and Director Krusen urged the general public to follow a simple set of rules, printed in the major newspapers on September 29: avoid large crowds, tight clothing, stale air or unventilated areas, sneezing, spitting, or coughing without a handkerchief, and working with flu-like symptoms.⁵⁰ Krusen's advice spoke only to matters related to public hygiene and germs, saying nothing of destabilizing conditions caused by bad plumbing, raw sewage, damp cellars, and overcrowded tenements. The timing of Krusen's announcement of "Some Influenza 'Don'ts,'" as the headline read, was also curious. On September 28, despite the increased infiltration of the disease among the civilian population, a rally for the Fourth Liberty Loan Drive proceeded with minimal debate about the repercussions for public health. In the streets of downtown Philadelphia 200,000 people gathered to celebrate an impending allied victory in World War I. Within a week of the rally an estimated 45,000 Philadelphians were afflicted with influenza.⁵¹ In spite of his own better judgment Krusen allowed the rally to go on as planned.

The second phase of the epidemic, from October 5 to October 31, represented the most deadly period of pestilence ever recorded in the city, with an estimated 11,000 people succumbing to the influenza virus in less than a month. It was also a period of terrible confusion for many of the afflicted. Dreadful conditions in South Philadelphia kept the wards of the General Hospital overflowing with patients from its tenement districts. The Sisters of the Immaculate Heart described the state of some of the affected on October 12:

There were about twenty-five or thirty men in each ward and adjoining shack. Most of these were men who had come to Philadelphia to work in ammunition plants, and generally had been living in one rented room. They were lying with the dirt of their work still on their hands and faces. Many of them had not received attention since their entrance. (The reason of this is, of course, evident—overcrowded conditions.)⁵²

One sister told of a grisly encounter with a patient on South Broad Street: “I undertook to undress her, and the flesh from her body fell off in my hands. It seems the people had put coal oil on her to ease the pain. She lived for four days in that agony.”⁵³ Fortunately, the DPHC received help with the massive numbers of sick and dying from just about every available source in Philadelphia. Mayor Smith transferred the city’s \$100,000 emergency fund into the hands of Director Krusen, and he received another \$25,000 from a war emergency fund to pay additional doctors and to stock makeshift emergency hospitals with supplies.⁵⁴ As Alfred Crosby observed in *America’s Forgotten Pandemic*, “Emergency hospitals, soup kitchens, and volunteer nurse and ambulance services were growing up like weeds in Philadelphia.” He also noted in the same breath, however, that “there was little cooperation or leadership” from within the municipal government.⁵⁵

Coordinated effort was ill-suited to the institutional culture of city government in Philadelphia, and bureaucrats’ private interests too often interfered with their ability to serve the public good. One prime example of this occurred on October 9 after the *Public Ledger* printed a series of photographs depicting filthy streets lined with garbage and an opening lead to an article which read: “It required a disastrous epidemic to start a thorough cleaning of this city’s streets.”⁵⁶ The paper reported that the streets were located in the political districts under Republican State Senator Edwin Vare’s watch—all in South Philadelphia—and were in the worst shape of any in the city. But the self-proclaimed “largest street-cleaning contractor in the world” was unable, or perhaps more accurately, unwilling to fulfill this responsibility during the epidemic, and he relinquished street cleaning duties temporarily to Krusen and the DPHC.⁵⁷ When asked why it was necessary to turn responsibility for flushing the city streets over to Krusen, Vare replied bluntly, “The Director and the head of the Street Cleaning Bureau have ordered extra flushing. This extra flushing is done without pay.”⁵⁸ Presumably Vare meant pay for his workers, but more than likely, he also meant extra pay for himself as well.

Krusen took up the street cleaning project after a battery of complaints to his office pointed to the public health menace posed by streets and alleys littered with garbage and, in some cases, raw sewage. The leader of the campaign was a private physician and advocate for sanitation reform, Dr. Howard Anders of Walnut Street. Anders condemned both Krusen and Vare for their failure to heed his warning in a September 28 editorial to the *Public Ledger*. In that article he argued that the germ-laden microbes that festered in the dirt and dust of the street, consistently trampled and re-circulated into the air by pedestrians, were a serious threat to public health. While human-to-human contact and water and mucus borne vectors no doubt played a leading role in spreading the disease, his linking of the expansion of influenza to dirty streets was nevertheless significant. The PHA had raised a comparable point about the state of the urban environment over the course of several years prior to the outbreak. By waiting nearly two weeks after the appearance of the virus to flush the streets, said Anders, it "is too late to prevent the epidemic. It should have been done and done thoroughly when warning was given, when knowledge should have prompted it before the disease arrived. It should have been done systematically weeks ago."⁵⁹ Another physician, Dr. Charles Hirsch of Pine Street, echoed Anders's discontent with the environmental situation and its effect on public health: "The people are the sufferers every way the condition is viewed, and they are a shining example of political beneficence now. Flushing the streets now may prevent a continuation of one of the greatest causes of the spread of the epidemic, but it cannot undo the wrong or bring back again those who have died."⁶⁰

Amid the chorus of complaints from sanitarians for increased attention to the environment, Krusen pressed on with a public education crusade on personal hygiene. While he was not wrong to warn the general populace against the perils of spitting and sneezing during the epidemic, he overstated the connection between individual behavior and the persistence of influenza in the city. After ordering the closure of all schools, saloons, cafés, theaters, and shutting down the rapid transit system, he focused on eradicating the culture of spitting, dirt, and dust through a program of "moral suasion." With the death toll mounting and thousands of newly reported flu cases flooding into the DPHC everyday, Krusen was determined to establish that if a person changed his or her insalubrious ways they just might stave off the deadly grippe. Fines for spitting in Philadelphia were set at \$2.50, and in one day, October 23, the Philadelphia *Evening Bulletin* reported 114 arrests.⁶¹ Like the tuberculosis crusades of the previous decades, it seemed that influenza

could be found everywhere and anywhere, and public health officers wanted to regulate its potential by severely curtailing potentially destructive and unpleasant public behavior. One "Disgusted Woman," editorialized in the *Public Ledger* that, "Don't-Spit signs should be placed in our post-office building in all languages necessary, to reach all foreign men, and with fines for violations."⁶² Another editorial warned that the taking away of fresh air on the street car constituted a threat to public health: "Half the people would be glad to have the windows open all the time; the other half is determined that they shall be kept closed. Between the two conflicting purposes the car crews are powerless. But intelligent passengers should resolutely insist upon plenty of fresh air...those who don't like fresh air ought not to be allowed to imperil the lives of those who do like it."⁶³ A third editorial, from October 6 recommended that, "whatever medical science may advise as a precaution or as a treatment, one simple fact that outweighs everything else is that if every individual will but follow the normal life he has led...he will escape the grip."⁶⁴ Krusen's personal hygiene crusade was taken up with great determination, but the sheer number of rules more than likely confused people and forced them to stick to the behavioral habits that were most comfortable and familiar.

Krusen's suggestions did not prevent the epidemic from raging through Philadelphia at a prolific rate. Frustrated with what he perceived to be a shortage of respect for his recommendations, he lashed out at the people of South Philadelphia, "where the situation is regarded as serious by the health officials, not because of any extraordinary number of cases, but on account of the ignorance of its population."⁶⁵ Krusen believed that his recommendations were being undermined in the tenement districts and slums, where the people tended to have a "child-like tendency to panic."⁶⁶ But before he could initiate any additional behavioral limitations, influenza virtually disappeared from within the city's border. Although as late as December 14 officials reported as many as thirty-four new cases of influenza in a single day, the third and final phase of the epidemic—from November 1 through the end of December 1918—was characterized by a precipitous decline in the number of fatalities. By October 31, however, the losses were already staggering. The Pennsylvania State Health Commission and insurance statisticians estimated that the human losses from October 1 to October 31 alone translated into a fifty-five million dollar deficit for Philadelphia businesses.⁶⁷ The *Public Ledger*, in agreement with sanitarians and reformers, found that Philadelphia "paid a tremendous toll" because of the "dereliction of its street-cleaning

department, which has permitted a condition to exist on the thoroughfares of the city that is an abomination.”⁶⁸ Whatever the interpretation of its causes, the city’s death rate from influenza, at approximately 407 per 100,000 people, exceeded that of all other major American cities in 1918.⁶⁹

In the aftermath of the calamitous final months of 1918 there were mixed results with regard to public health and environmental improvement. Health experts continued to challenge citizens to take on the personal responsibility of curbing infectious diseases, as Dr. Randle Rosenberger, a bacteriologist at Jefferson Medical College, told the *Evening Bulletin*: “And what is the big preventive cure to stay off a re-occurrence of another epidemic—that cure lies with the people themselves.”⁷⁰ The Philadelphia Housing Association also pressed ahead with its campaign to stamp out social deviance by promoting the advantages of well-constructed and well-kept homes in bringing “American standards of living into the home of the foreign-born tenant.”⁷¹ As both groups talked past each other, overcrowding and environmental hazards persisted and tenement dwellers continued to experience the harmful effects of cramped and congested conditions well after the influenza epidemic had abated. The *Public Ledger* reported in July 1919, for example, on a tenement building that “hived” 111 people of ten different nationalities, 68 of whom were from Eastern Europe. Ethnic tension created “drunken brawls here every night,” reported the paper, while two small children were in the hospital with scarlet fever, another three were sick with measles, and a lone child suffered from infantile paralysis.⁷²

A few positive steps toward reform, however, were taken in the wake of the epidemic. After a year-long vacancy, in December 1918 the city finally filled the chief position at the Division of Housing and Sanitation. In 1919, the city also orchestrated a massive restructuring of its health department in order to relieve the overburdened Department of Public Health and Charities of its multiple duties. The DPHC was re-formed as the Department of Public Health, with the Bureau of Charities falling under the jurisdiction of the Department of Public Welfare. The Hospital for Contagious Diseases was also removed from DPHC oversight and transferred to the Department of Public Health’s newly formed Bureau of Hospitals. Accompanying the administrative reorganization of Philadelphia’s public health apparatus were two important commitments from city officials to monitor environmental hazards. The City Council earmarked \$25,000 for DHS, “to be used exclusively for abating nuisance arising from defective drainage and in repaving alleys,” and pledged “through warning communication sent to the owners of

realty to put in better plumbing and to place all premises under their control in a sanitary condition forthwith under threat of prosecution...".⁷³ Although these mandates were primarily stopgap attempts to appease reformers who had been lobbying for decades for environmental and housing improvements, they nevertheless acknowledged the need to desegregate ideas about public health and to combine new disease prevention methods with older theories that emphasized the consequences of unsanitary environments.

Conclusion

Progressives' inability to meet on common ground, to combine activism with education, and to enact meaningful change in the form of stringent public health legislation or comprehensive housing and sanitation reform, opened the door for disease to reach epidemic proportions within Philadelphia. In the absence of a culture of coordinated environmental and public health management, a cohesive and flexible response to the influenza epidemic remained nearly impossible. Philadelphia's city administrators and reformers struggled to reconcile the philosophical tension between individualism and self-reliance and the cooperative spirit that had come to define American Progressivism. Constrained politically, Krusen and the DPHC took a patchwork approach to public health and the environment: they sought to transform human behavior rather than a deteriorating city infrastructure, they set responsibility for public health in the laps of individuals, and they ignored the advice of environmentally conscious reformers. Ihlder and the PHA followed a proactive path to environmental management, offered concrete solutions to tangible problems, and tried to anticipate crisis before it happened. PHA inspectors, however, lacked political clout and the means to implement the recommendations that they made in their surveys. They were also too frequently preoccupied with connecting degenerative environmental conditions to social deviance among foreigners and African Americans, and they lost sight of the perceptible human qualities of the people they were trying to help. The inability of city health officials and reformers to construct a common plan for disease prevention—to focus on what they *could* control working interdependently—that accounted for citizen education, community action, as well as for extensive clean-up initiatives, had significant repercussions for the city, especially its poor and working-class residents, in the years between 1915 and 1919.

Philadelphia's experience with influenza and the environmental morass that preceded it has both historical and contemporary implications. Rapid industrialization and mechanization in the early twentieth century transformed the city's environmental landscape and its human geography. As immigrants and African Americans found spaces to live in already cramped locations without basic sanitary services close to Philadelphia's industrial center, they inadvertently placed themselves in dangerously unhealthy living arrangements. Desperate for work, many took low-wage jobs and sought cheap rents in neighborhoods run by exploitative landlords who cared little about the safety or well being of their tenants. Despite good faith attempts to implant an ad hoc program of environmental justice during war time, reformers' focus on regulating social behavior and eradicating alien cultures muted attention to the stark racial and class inequalities that isolated them from their impoverished neighbors in the first place. Social fragmentation reinforced environmental degradation and weakened the city's immunity, symbolically if not therapeutically, to the epidemic. As similar processes peculiar to expanding industrial nations replicate themselves around the world, many of the same socially and environmentally linked pathologies that existed in Philadelphia in 1918 still exist today—overcrowded housing, tainted water supplies, filthy streets, and inadequate sanitation and plumbing affect millions of people worldwide. In light of recent threats to world public health stability by virulent diseases such as Severe Acute Respiratory Syndrome (SARS) and the A(H5N1) avian influenza—which, to date, has killed half the people it has infected—new organizational dilemmas have arisen to create problems for health officials. Without community and grass-roots participation, access to modern technology, international and inter-governmental cooperation, and broad-based education programs, pandemic flu could result in as many victims, if not more, than it did nearly ninety years ago. Let Philadelphia's experience serve as a tragic lesson not to be repeated.

NOTES

I would like to thank Paul Rosier of Villanova University for his encouragement and the two anonymous readers for their insightful comments.

1. F.E. Tourscher, *Work of the Sisters During the Epidemic of Influenza, October 1918*, gathered and arranged from reports of personal experiences of the sisters, (Philadelphia: The American Catholic Society of Philadelphia, 1919), 21.

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2. Newspaper Clippings of the Philadelphia Housing Association, 1917–1919, 3/II/134, Box 23, Philadelphia *Public Ledger*, September 21, 1918 (unmounted). Manuscript Collection of The Housing Association of Delaware Valley, Urban Archives at Temple University. Hereafter unmounted newspaper clippings citations will be abbreviated as “PHA Clippings,” with the appropriate newspaper name and date. The unmounted clippings, as opposed to the mounted ones (see below), were often without a page number and were occasionally without a headline. For the sake of consistency, I have chosen not to include any headline titles or page numbers in the notes.
3. Tourshcer, *Work of the Sisters During the Epidemic of Influenza, October 1918*, 22.
4. Newspaper Clippings of the Philadelphia Housing Association, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Clergymen Find Homes in Squalor,” October 27, 1918, 39 (mounted). Manuscript Collection of The Housing Association of Delaware Valley, Urban Archives at Temple University. Henceforth mounted newspaper clippings citations will also be referred to as “PHA Clippings.” Titles are included for all mounted articles and page numbers refer to the mounted page, not the actual page in the newspaper. Readers can distinguish a mounted from an unmounted article either by looking at the different archival box numbers or by simply noting that the former has a title and page number included and the latter does not.
5. Alfred W Crosby, *America's Forgotten Pandemic: The Influenza of 1918*. 2nd ed. (New York: Cambridge University Press, 1989).
6. Jeffrey S. Anderson, “‘When We Have a Few More Epidemics the City Officials Will Awake’: Philadelphia and the Influenza Epidemic of 1918–1919” *Maryland Historian* 27 (1996), 24.
7. John Barry, *The Great Influenza: The Epic Story of the Deadliest Plague in History* (New York: Viking, 2004), 5.
8. Hibbert Winslow Hill. *The New Public Health* (New York: The MacMillan Press, 1916), 7–25. See also, Martin Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to Present* (Baltimore: Johns Hopkins University Press, 2000), 110–112.
9. On the environment and public health in the nineteenth-century, see Charles Rosenberg's classic study, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962).
10. Melosi, *The Sanitary City*, 113.
11. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Fit Men From Fit Homes,” August 4, 1917, 8.
12. Jacob Riis, *How the Other Half Lives: Studies Among the Tenements of New York*, The Bedford Series in History and Culture (Boston: St. Martin's Press, 1996).
13. Riis, *How the Other Half Lives*, 254.
14. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Sanitary Curb A Farce, Says Housing Chief,” November 23, 1918, 40.
15. Department of Commerce—Bureau of Census. *Mortality Rates, 1910–1920*. With Population of the Federal Census of 1910 and 1920 and Intercensal Estimates of Population (Washington: Government Printing Office, 1923), 286.
16. John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Macmillan Company, 1916), 11.

17. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Who Then Is My Neighbor?” July 4, 1917, 6.
18. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Filthy Conditions Near Rich Homes: Housing Commission Finds Many Disease-Breeding Places,” June 30, 1917, 6.
19. Allen F. Davis, et al., eds., *Still Philadelphia: A Photographic History, 1890–1940* (Philadelphia: Temple University Press, 1983), 122–24.
20. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Philadelphia North American*, “Housing Conditions Bad, City Inspectors Report,” June 30, 1917, 4.
21. Joel Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron, OH: University of Akron Press, 1996), 77.
22. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Fit Men From Fit Homes,” August 4, 1917, 8.
23. Department of Commerce—Bureau of the Census, *Thirteenth Census of the United States*, Vol. 3 (Washington: Government Printing Office, 1912), 605.
24. Department of Commerce—Bureau of Census, *Fourteenth Census of the United States*, Vol. 3 (Washington: Government Printing Office, 1922), 896–899.
25. U.S. Census Bureau, *Thirteenth Census of the United States*, Vol. 3, 605–608.
26. Office Files of the Philadelphia Housing Association, 1906–1916, 3/I/169, Box 12, “Seventh Ward Survey,” 2–3. Manuscript Collection of The Housing Association of Delaware Valley, Urban Archives at Temple University. Hereafter referred to as “PHA Office Files.”
27. PHA Office Files, 1906–1916, 3/I/169, Box 12, “Seventh Ward Survey,” 5.
28. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Filthy Dens Border Rittenhouse Square,” June 30, 1917, 5.
29. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Philadelphia Press*, “Disease Breeding Conditions Found,” June 30, 1917, 4–5.
30. PHA Clippings, 1917–1919, 3/II/133, Box 22, *North American*, “Housing Conditions Bad, City Inspectors Report,” June 30, 1917, 4.
31. PHA Clippings, 1917–1919, 3/II/133, Box 22, *North American*, “Bad Housing Raises Death Rate in Phila., Association Reports,” May 27, 1918, 30–31.
32. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Sanitary Curb A Farce, Says Housing Chief,” November 23, 1918, 39.
33. PHA Clippings, 1917–1919, 3/II/133, Box 22, *North American*, “Housing Conditions Bad, Inspectors Report,” June 30, 1917, 4.
34. PHA Office Files, 1917–1920, 3/II/123, Box 21, “Negro Migration Study—Report of P.H.A. by Annette Gibson McCall,” 4.
35. PHA Office Files, 1917–1920, 3/II/123, Box 21, “Negro Migration Study—Report of P.H.A. by Annette Gibson McCall,” 1, 7.
36. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Philadelphia Inquirer*, “‘Lodging for Night’ Is A War Problem,” May 20, 1917, #1.
37. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Inquirer*, “‘Lodging For Night’ Is A War Problem,” May 20, 1917, #1.

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38. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger*, “Fit Men From Fit Homes,” August 4, 1917, 8.
39. PHA Clippings, 1917–1919, 3/II/133, Box 22, *Public Ledger* (Evening edition), “Filthy Conditions Near Rich Homes,” June 30, 1917, 6.
40. PHA Office Files, 1906–1916, 3/I/169, Box 12, “Seventh Ward Survey,” 5.
41. PHA Office Files, 1906–1916, 3/I/169, Box 12, “Seventh Ward Survey,” page number unmarked.
42. PHA Office Files, 1906–1916, 3/I/169, Box 12, “Seventh Ward Survey,” 2. The Philadelphia Housing Authority, prior to 1916, was known as the Philadelphia Housing Commission.
43. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 19, 1918.
44. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 22, 1918.
45. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 19, 1918.
46. Gerald N. Grob. *The Deadly Truth: The History of Disease in America* (Cambridge, MA: Harvard Press, 2002), 191–192.
47. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 23, 1918.
48. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 23, 1918.
49. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, September 29, 1918.
50. George D. McDowell Philadelphia *Evening Bulletin* Newsclipping Collection, *Evening Bulletin*, “Influenza Don’ts,” September 29, 1918. Newspaper Clippings Collection, Urban Archives at Temple University. Hereafter referred to as *Bulletin* Newsclipping Collection.
51. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger* October 5, 1918.
52. Tourscher, *Work of the Sisters During the Epidemic of Influenza, October 1918*, 22.
53. Tourscher, *Work of the Sisters During the Epidemic of Influenza, October 1918*, 24.
54. *Bulletin* Newsclipping Collection, *Evening Bulletin*, “City Gives \$100,000 Fund to Fight ‘Flu’; Epidemic Spreads,” October 8, 1918; see also, Barry, *The Great Influenza*, 325.
55. Crosby, *America’s Forgotten Pandemic*, 78.
56. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 9, 1918.
57. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 10, 1918.
58. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 10, 1918.
59. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 9, 1918.
60. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 9, 1918.
61. *Bulletin* Newsclipping Collection, *Evening Bulletin*, “[Police?] Fine 114 for Spitting,” October 23, 1918. The beginning of the article’s title was cut off.
62. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 25, 1918.
63. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 10, 1918.
64. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 6, 1918.
65. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 5, 1918.
66. PHA Clippings, 1917–1919, 3/II/134, Box 23, *Public Ledger*, October 5, 1918.
67. *Bulletin* Newsclipping Collection, *Evening Bulletin*, “Influenza Deaths Here Equal \$55,000,000 Cash Loss,” October 31, 1918.
68. *Bulletin* Newsclipping Collection, *Evening Bulletin*, “Influenza Death Rate Heaviest in Philadelphia,” January 6, 1919.
69. U.S. Census Bureau, *Mortality Rates, 1910–1920*, 286.

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70. *Bulletin* Newsclipping Collection, *Evening Bulletin*, "Phila.'s Epidemic Wasn't Influenza," November 1, 1918.
71. PHA Clippings, 1917-1919, 3/II/133, Box 22, publication unidentified, undated, "Improving Housing Conditions Among the Foreign Born," 50.
72. PHA Clippings, 1917-1919, 3/II/133, Box 22, *Public Ledger*, "111 Persons Hived in One Tenement," July 17, 1919, 50.
73. PHA Clippings, 1917-1919, 3/II/133, Box 22, *Public Ledger* (Evening edition), "Housing Conditions Somewhat Improved," July 5, 1919, 50.