Peering into the PRIVIES OF THE PAST

An Analysis of Nineteenth-Century Privy Construction Methods and Contents

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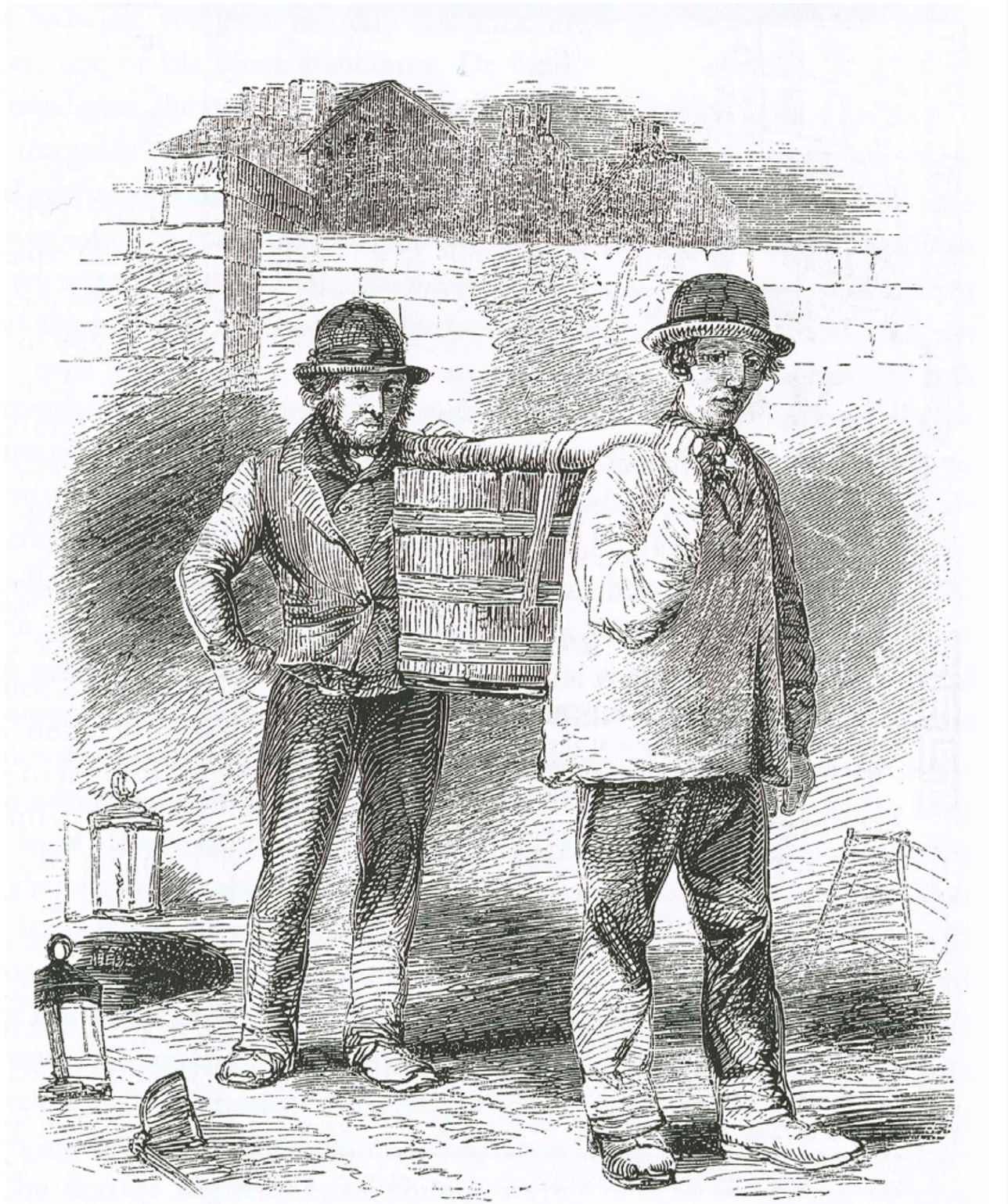
The privy is one of the most common features encountered during archaeological excavations in the backyards of houses that once lined the streets of the Kensington and Port Richmond neighborhoods. Throughout Philadelphia's history, people have used their backyards for many purposes. Although some backyards included kitchens or decorative gardens, such spaces have also been used as work areas where people hung out their clothes to dry and performed tasks that were messy or took up too much space to do indoors. Backyards also provided places to work when it was too hot to labor inside and to keep animals, such as pigs and chickens.[1] From an archaeological perspective, backyards were the sites of basic utilities, such as outhouses (or privies) for human waste, and rain barrels and/or cisterns to store water.

Because the business ends of privies were below ground, these features—along with cisterns, wells, and other structures—survive throughout the city in the backyards of still-standing houses and demolished buildings, as well as under and around the I-95 roadway. In the smaller lots, privies could be located practically right outside the back door. In bigger lots, they were usually placed farther away, generally along the boundaries of the properties, probably near commonly shared fences. Typically, the shafts were used for rubbish and trash disposal both during and after use as privies. The trash deposited in these shafts provides many insights into the everyday life and cultures of the past. In addition, the remains of these backyard fortresses of solitude themselves are artifacts providing information on the variety of construction techniques and their placement in backyard landscapes.

Row houses and backyards in the Northern Liberties neighborhood of Philadelphia, as photographed in 1949. *City of Philadelphia Department of Records, 1949.*



Privy vaults were essentially holes in the ground—often lined with stone, brick, or wood—located close to residences or in cellars. Although surrounding soil absorbed most of the contents of a well-constructed privy vault, the receptacles still needed periodic emptying. In some cities, scavengers or farmers removed the contents for fertilizer, often under contract with the municipality. In many locales, however, householders merely covered the full vaults with dirt and dug new receptacles. Removal was inefficient and labor-intensive, and the system was largely privately maintained. Urban population growth enlarged the pressure on existing facilities, increased the frequency of cleaning, and necessitated the digging of new privies in urban alleys, backyards, and cellars. Located close together and serving larger populations, these receptacles often overflowed, causing nuisances and malodorous problems. The carts of the privy cleaners who transported the waste after removal from the privies created similar difficulties. Soil saturated with fecal waste sometimes contaminated groundwater supplies and wells.[2]

The dense, organic human waste product transported in these carts was colloquially known as "night soil." The term likely originated in seventeenth-century England, where the urban tradesmen who cleaned privies were known as nightmen. This practice continued into nineteenth-century Manhattan, where regulations required that privy cleaning occur only at night.[3]

Rules and Regulations

The City of Philadelphia enacted several laws regarding privies and their cleaning, both to make sure they were cleaned regularly and that the contents did not get dumped into the alleys and streets.[4] By the late 1840s, the public had become interested in sanitary reform due to outbreaks of cholera and the discovery of the relationship between tainted water and disease.[5] In 1848, the Philadelphia City Board of Health enacted rules and regulations in relation to cleaning privies, stipulating that "every person wishing to be licensed to clean Privies… shall set forth the number of carts and horses owned by him… the applicant must be of good character… said carts are securely covered and fastened at the top, and perfectly water tight."[6] In 1851, it became necessary for owners and tenants to notify the Health Office before having a privy cleaned, pay for a permit to do so, and engage the services of licensed privy cleaners.[7] When a privy was full, the owner retained both a permit and a licensed contractor who would use buckets to "dip" the contents out of the privy. The covered buckets containing the night soil would hopefully go into a covered wagon and most likely get removed outside the city boundaries.[8] In 1875, this bucket-and-cart system was abolished, and the contractors were required to use an odorless, air-tight pump-and-hose system. By the 1850s, privy contractors throughout the city were required to document their activities in privy-well measurers books, which recorded the owner, address, type, and size of each privy, as well as its condition.

By the mid-nineteenth century, regulations governing the cleaning of privies during their use also applied to the final closing of a shaft.[9] Most appear to have been cleaned of waste prior to infilling, but in some cases, small deposits of waste containing artifacts discarded during the use of the privy were left at the bottom. By the late nineteenth century and into the early twentieth century, houses across the city were gradually connected to city sewer systems, resulting in the demise of the backyard toilets and ushering in a new era of indoor "water closets" and interior plumbing.

(Left) Mid-nineteenth-century London privy cleaners using the bucket method to empty the privy behind them. Note the lamps on either side of the privy shaft, indicating that they did their work at night. *"London Nightmen," Mayhew 1861.*

(Right) Odorless privy cleaning system adopted at the end of the nineteenth century as a sanitary measure. *Image courtesy of Rebecca L. White.*

Single barrel privy from the Gunner's Run Site excavations. *AECOM project photograph, 2012.*

Privy Types

Privy shafts discovered in Kensington and Port Richmond for the I-95/GIR Improvement Corridor Project were largely found in the backyards of houses that fronted onto streets between Frankford and Berks in Kensington, and Cambria and Ann in Port Richmond. The types of privy shafts encountered consist of barrels, wood-lined boxes, and brick shafts. Sometimes just two of these forms occur, but often all three are found on a property. Approximately 350 privy shafts have been excavated, with more being discovered as the project proceeds.

The easiest to install, and possibly the oldest form of privy, is a simple barrel. Fishtown, being located along the Delaware River, was closely tied to the fishing and shipping industry of early Philadelphia. Many products were shipped in large barrels. Once these storage containers were emptied of their product, it was easy to dig a hole, bury a barrel, build a little house over it for privacy's sake, and begin to fill the barrel with your own "product."

Barrel privies became a common form of outhouse in the seventeenth century—as documented through archaeological excavations in Philadelphia, New York City, Trenton, and other colonial cities—and were sometimes stacked, with their tops and bottoms removed and the upper barrels placed on top of the lower ones, extending privies to greater depths. The bottoms were removed to promote drainage into the underlying soils.

The barrel privies discovered during excavations for the I-95 project have more often been the single-barrel variety. Less frequently, they have consisted of two stacked barrels. The single-barrel style may have been prevalent for one rather important reason: you can't flush a privy—what goes in does not magically disappear with the press of a handle. Stacked barrels extended to depths of approximately 7 feet, an advantage in holding more "product," but a disadvantage when attempting to clean out the receptacle to the bottom.

Two sizes of barrels are generally represented in the neighborhoods explored for the I-95 project: 30 inches and 48 inches in diameter. The larger 48-inch barrels dominated the discovered stacked privies. Occasionally,

Small diameter barrel during excavation. *AECOM project photograph, 2009.*

the barrel bottoms were left intact. Although the shaft pictured here did not follow the general rule, the presence of night soil and an intact chamber pot leaves little doubt about function. At 30 inches diameter and only 3 feet deep, this privy must have filled up fairly quickly and would have to be emptied out more frequently.

Wood-lined box shafts are the second type of privy encountered in Fishtown. The majority of the privies excavated are the square shape of a one-seater, but we have encountered numerous rectangular, or two-seater, forms. The two-seater probably included an adult size and child size opening. The actual construction of the boxes varies significantly. Before excavation, wood-lined box privies appear on the surface as square dark soil stains with the outline of wood linings visible around the edges of features. The wood-box privies vary in size, ranging from approximately 4-foot-square to 4-x-8-foot rectangular structures extending to depths of 4–6 feet. Wood lining also varies, consisting of boards or planks placed horizontally or vertically.

The more sophisticated wood-lined box privies found during the I-95 project are constructed of tongue-and-groove joints fastened by pegs, while others consist of simple boards nailed together. Not all box privies are assembled with the same care and workmanship. Some show a degree of skill in construction, while others

(Top) Small barrel privy with intact bottom excavated at the Fishtown One Site. *AECOM project photograph, 2012.*

(Bottom) **R**ectangular two-seater wood box privy. *AECOM project photograph, 2013.*

to have been put together with scrap wood held in place through a combination of nails, wood shims, and hope, with expected results. The wood-box privies in this part of Philadelphia appear to have been constructed from the early through mid-nineteenth century, based on the dates of artifacts recovered from privy fill.

Although we do not have any documentary evidence yet to explain why wood-lined box and barrel shafts were abandoned, it seems likely they deteriorated over time and had to be replaced. Many newspaper articles from the nineteenth century mention incidents involving the collapse of privies. In August 1841, the wife of Joseph Jones fell down a privy shaft in Philadelphia due to the entire floor collapsing. Luckily for Mrs. Jones, she was hung up on a piece of the flooring that had caught against the sides of the shaft and was rescued before falling completely into the shaft.[10] Another incident in December 1841 was reported when a man near Dock Street in Philadelphia had to be rescued because an entire privy collapsed on him after a heavy rain.[11]

"..archaeological excavation provides a physical connection with the past..."

Well-constructed brick shafts characterize the third variety of privy encountered during the I-95 project. In the Kensington neighborhood, these privies are usually about 4–5 feet in diameter and approximately 6 feet in depth. Brick shafts were constructed to much greater depths in other parts of the city, some extending to 20 feet deep or more.[12] The shallower depth in the project area is probably the result of the higher water table. Some brick privies can be fairly large, up to 8 feet in diameter, and are mostly constructed with a footer ring at the base. In the Kensington and Port Richmond neighborhoods, these shafts seem to have been constructed in the second half of the nineteenth century. These large shafts are interpreted as privies because there is no evidence of efforts to seal the interior walls that would indicate a water-collecting cistern, and they are not deep enough to be wells. The brick shafts are generally situated adjacent to or even cutting into earlier barrel and box privies, indicating their use for human waste rather than water storage. AECOM archaeologists have also found the remnants of brick foundation walls that were probably once part of aboveground outhouse structures.

When a new privy was constructed, the old one became a useful dumping place for household trash. The barrel and wood-lined box privies from the earlier nineteenth century were generally filled in with large numbers of domestic artifacts, and the shafts served as trash receptacles at the time of their infilling. Fill excavated from the brick shafts consists largely of building debris or other mixed material, yielding fewer domestic artifacts. Prior to the advent of the city sewer system in the early twentieth century, brick privy shafts

Wood-lined box privies (square soil stains in the back row) and barrel privies (circular soil stains) prior to excavation.
AECOM project photograph, 2010.

Collapsed wood box privy.
AECOM project photograph, 2013.

Large brick shaft privy with foot ring from the Columbia Avenue Site.
AECOM project photograph, 2009.

were often converted to drainage basins, with waste water from washhouses and kitchens transported via pipes to the shafts.

Why Do Archaeologists Peer Into Privies?

The main reason archaeologists are so interested in privies is that the artifacts recovered from these shafts have the potential to provide snapshots of domestic life at the time of deposition. While documentary and historical research is essential to understanding social history and the "why and how" things happened, archaeological excavation provides a physical connection with the past. The privies, foundations, burials, and trash pits archaeologists carefully excavate provide these connections. These features and the artifacts they contain can potentially add new information not necessarily found through documentary research alone. Prime examples of this are the unique handmade glass artifacts recovered from the privies excavated on properties between Palmer Street and Gunner's Run, an area with a higher percentage of glass workers than other sections of the project. The artifacts, combined with background research, are providing invaluable insights into the lives and skills of these craftsmen. As the I-95/GIR Improvement Corridor Project proceeds, continuing study of the artifacts recovered from privies along the 3-mile stretch of waterfront communities will offer the opportunity to further explore and interpret daily life at various points throughout the eighteenth and nineteenth centuries.

George Cress has over 30 years' experience in archaeology and cultural resources management. His interests include the archaeology of early American manufacturing and industrial processes and the evolution of the urban landscape.

Daniel B. Eichinger III has spent has spent quite a lot of time peering into privies and various holes in the ground. He has a Master's degree in Archaeology and Heritage from the University of Leicester, several papers for the Council for Northeast Historical Archaeology and the Society for Historical Archaeology.

(Above) The squared brick feature to the right of this circular privy pit is probably the foundation for an outhouse structure, found at the Gunner's Run Site.
AECOM project photograph, 2012.

(Right) Wood-lined box privy showing artifacts.
AECOM project photograph, 2013.