

Porkopolis: How It Came To Be And Its Legacy

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Abstract

During the first half of the nineteenth century Cincinnati, Ohio became the pork-packing center of America. A combination of ideal river placement to facilitate trade, farming trends in the westward expansion of the United States which provided the city with millions of well-fed hogs, developments in industrialization, innovation in the slaughtering, packing, and by-product industries, and more allowed for the city to become known as Porkopolis. Each winter the many meatpacking facilities of the city would slaughter and process thousands of hogs, reaching upwards of 500,000 by the 1850s. This industry supplied the city's citizens with jobs and brought large amounts of revenue into the city. The success of the pork-packing facilities was assisted by the importance of the by-product industry. Lard, the most valuable of the pig's many by-products, was beneficial in a wide range of domestic and industrial uses, especially with the production of candles and soap. The ascendancy of Cincinnati as the pork-packing capital had a number of wide-ranging effects on the city. It encouraged further industrialization and the expansion into multiple industries while placing a heavy environmental burden on the city as Cincinnati's many waterways were polluted with animal and industrial wastes. However, Cincinnati's dominance over the pork industry was not to last. The continued expansion of the United States and therefore the corn-hog method of agriculture encouraged the growth of packing centers elsewhere while railroads made long-distance transportation of hogs feasible, reducing the competitive advantage Cincinnati had over other cities. The Civil War closed off southern trade for Cincinnati, costing the city's pork packers their biggest client: Southern plantations. Ultimately, Chicago would take the title as the nation's largest pork-packing city, but the story of Porkopolis would remain in Cincinnati as a reminder of the city's porcine past and hopeful prospects for the future.

Factors Leading to the Rise of Porkopolis

During the 19th century Cincinnati went through a transformative process as it gained the reputation as “Porkopolis,” a title officially bestowed upon the city in 1825. The city earned the name by becoming the leading pork-producing city by volume. It outpaced every other city in America in pork-production for the first half of the 19th century. A combination of factors, including ideal river placement, growing populations, trends in agriculture favoring pig farming, industrial innovation, and more allowed for the city’s meat-packing industry to grow and for the city to make a name for itself. This process brought the city industry, fortune, and fame (as well as infamy). It also brought with it a heavy environmental toll on both the urban and rural environments. Although Cincinnati did not remain the Empire City of Pigs forever, this process did permanently alter the trajectory of the city and its economy, leaving it with a complex legacy that, despite its environmental toll, is cherished to this day.¹

The process of becoming Porkopolis did not happen overnight, nor did it occur by chance. A plethora of factors, ranging from geography to socioeconomic trends, allowed for the city’s meatpacking industry to flourish as the nation expanded west.

One of the most important environmental factors in allowing for Cincinnati to flourish was its access to various waterways. The greatest of these waterways was the Ohio River. River cities like Cincinnati rely on their rivers to connect them to the wider world, to bring in revenue, and encourage expansion. The river provided many invaluable services, including the facilitation of expansion and trade westward as well as the carrying of effluent downstream and away from

¹ “Cincinnati: Quotations Concerning Pigs, Lard and Legacy.” Porkopolis, March 20, 2016. <https://www.porkopolis.org/quotations/cincinnati/>.

the city.² Colonists used the Ohio River to reach their homesteads nestled among the rich farmland of Ohio and Kentucky while merchants used it to carry products south to New Orleans and then east to the coastal states. In the early days of the city the river was vital in ensuring a steady supply of goods and settlers, both of which were vital in keeping the young city afloat. Steamboats, beginning in at the start of the nineteenth century, would enhance the usefulness of waterways as these vessels significantly cut down travel time and costs. Having goods to trade is one thing, being able to sell them in a timely and efficiently is another. Rivers and steamboats provided the city with access to long-distance trade at the eve of the pork-packing era of the city. After 1817, steamboats would grow in importance as the city and its industries grew, helping transport Cincinnati's many products up and down river.³ The proliferation of steamboats on the river ensured the city that its many goods could be shipped out in a timely manner. Many of the future industrial plants of Cincinnati, especially the meatpacking facilities, would be built on the banks of the Ohio in order to make loading barrels onto boats easier.⁴ The banks of the Ohio, though quiet at the founding of the city, would turn into a bustling harbor filled with ships, people, goods, and pork.

The Ohio River's status is further enhanced by being a tributary of the mighty Mississippi River. Connection to the Gulf of Mexico, and by extension the Atlantic coast states and beyond, further enhanced the economic value of the river. Cincinnatians, through their connection with the rivers, were able to trade with people from far beyond the Midwest. Some of the city's biggest pork buyers were located downstream of them. As early as 1807 there was significant

² Walsh, Margaret. *The Rise of the Midwestern Meat Packing Industry*. (University Press of Kentucky, 1982), 48.

³ Stradling, David. *Cincinnati: From River City to Highway Metropolis*. Charleston, South Carolina: Arcadia, 2003., 25.

⁴ Hurt, Douglas R., "Pork and Porkopolis," *The Cincinnati Historical Society Bulletin*, vol. 40, no. 1, (Spring 1982): 191-215., 199.

river traffic passing through Cincinnati, with 1,800 boats shipping cargo south and only 11 going upstream.⁵ Before railroads connected the cities and settlements of America, rivers and their tributaries acted as the pathways of mass trade and transportation. Such a huge fleet of cargo ships shows the importance Cincinnati played as a stopping point along the southward trade routes. Southern plantation owners, worried that slaves would steal hogs if the plantation raised them themselves, outsourced the production of hogs and would import thousands of pounds of pork each year. Southern demand for pork products helped bring Cincinnati's pork industry to the front.⁶ Similar to the textile factories that used Southern cotton, Cincinnati pork packers benefited from slavery in that much of their revenue came from plantation owners.

The forests and fields of Ohio are bisected by a few creeks and streams that feed into the Ohio River. Rivers such as the Miami, Licking, and Scioto became important arteries of trade as the city's industries grew throughout the 19th century as these streams connected the city to the agricultural hinterlands, allowing for farm products to be shipped downstream toward the city and manufactured and other goods to be taken upstream to rural villages. Such trends were enhanced by the increased use of steamboats which significantly cut down on river travel time.⁷

Many of these streams, such as the Mill and Deer Creeks emptied into the Ohio River where Cincinnati now lies. Prior to European settlement, these valleys were described as being lush and filled with life. During an expedition in 1751, British explorer Christopher Gist described the Mill Creek Valley as being,

...well-timbered with large Walnut, Ash, Sugar trees, Cherry Trees & it is well watered with a great number of little streams or rivulets, and full of beautiful natural meadows,

⁵ Stradling, *Cincinnati*, 15-16

⁶ Clark, John G., *The Grain Trade in the Old Northwest*. Urbana: University of Illinois Press, 1966., 17.

⁷ Stradling, *Cincinnati*, 34.

covered with wild Rye, Bluegrass and Clover, and abound with Turkeys, Deer, Elks and most sorts of Game.⁸

Hearing descriptions such as this one persuaded people to move west as the natural beauty and, more importantly to the average yeoman, the potential agricultural productivity of the region was enticing. Living in such a naturally rich country meant that settlers could rely on bountiful fish, game, and forage as they got their homes built and fields plowed. Despite their beauty, these creeks would eventually be treated as natural sewage systems and as such many slaughterhouses would be constructed on their banks.⁹ The blood and leftovers of slaughtered pigs trickled into the Deer and Mill Creeks, eventually finding their way into the Ohio River.¹⁰ In the early days of the city the population and pollution were small enough that it did not matter, but as time went on and the city grew, the pollutants dumped into the river would transform these creeks into little more than streams of blood and chemicals.

Cincinnati's development occurred alongside the age of canals. These artificial waterways connected distant bodies of water in order to stimulate trade and travel. The Ohio and Erie Canal, which opened in 1825 greatly expanded the amount of farmland that was within the city's reach.¹¹ Canals encouraged further settlement in the area, increasing the agricultural production of the region in a short time span. The Miami and Erie Canal and others would go on to further solidify the city's dominance in the region by connecting far off farms and towns to Cincinnati.¹² Distant farmers could now ship their pork and pigs to the city for packing, rather

⁸ Bach, Andrew, Olivia Hedges, and Lizzy Geraghty. "Ecology: Flora and Fauna of the Mill Creek Watershed." ArcGIS StoryMaps, April 18, 2021. <https://storymaps.arcgis.com/stories/d9cfbfac13e74d578c79fb50734b12f0>.

⁹ Gordon, Steve C. "From Slaughterhouse to Soap-Boiler: Cincinnati's Meat Packing Industry, Changing Technologies, and the Rise of Mass Production, 1825-1870." *IA. The Journal of the Society for Industrial Archeology* 16, no. 1 (1990): 55-67. <http://www.jstor.org/stable/40968184>, 56.

¹⁰ Stradling, *Cincinnati*, 34.

¹¹ Walsh, *The Rise*, 48.

¹² Walsh, *The Rise*, 48.

than spend days or weeks driving them to the city themselves (although hog drives would continue to be popular up until the expansion of the railroad in the midcentury). The canals that connected with the Ohio River within city limits would act as magnets for industry and commerce.¹³ Some of the busiest and most industrious sectors of Cincinnati lay alongside these canals. These areas also tended to be the filthiest.

Through tributaries and canals, Cincinnati's future pork industry had access to a seemingly endless supply of pigs. However, the city and region as a whole sorely lacked one key component to meatpacking: salt. Without salt, the industry never would have risen to the prominence it reached during the mid-19th century. Every 200 pounds of packed meat requires 50 pounds of salt as well as some more for the brine it is stored in; such demands could only be met by importing salt.¹⁴ The Ohio and Erie canal solved this issue by ensuring that a constant supply of salt would be imported from central New York.¹⁵ While Cincinnati originally lacked salt, it had all the other necessary components: trade routes, good soil, and access to hogs that allowed the industry to get started in the first place. A salt-rich region such as central New York did not have the means to produce a competitive number of hogs compared to the fruitful fields and pastures of Ohio as the corn-hog style of agriculture, the growing of corn to feed hogs, had shifted west and the region was dedicated to growing cereals and other crops instead. New York also lacked the direct route to New Orleans and the South, unlike Cincinnati. The nexus of the Miami and Erie Canal and the Ohio River provided Cincinnati with the most direct route to the southern markets and to the northern supply line of salt. For the first half of the 19th century

¹³Hedeem, Stanley. *The Mill Creek: An Unnatural History of an Urban Stream*. Cincinnati: Blue Heron Press, 1994., 75.

¹⁴ Anderson, *Capitalist Pigs*, 111

¹⁵ Stradling, *Cincinnati*, 26.

Cincinnati acted as the main connection point between North and South on the western frontier. The role that canals played in the transport of pigs, pork, salt, and other goods was vital to the success of the pork industry in Cincinnati.

The fertile soils found in the river valleys near Cincinnati allowed for bountiful harvests, encouraging people to settle in the region in the first place. The Miami Valley and Kentucky Bluegrass regions were particularly well suited for farming.¹⁶ Nutrient-rich streams and the prehistoric movement of glaciers transporting viable sediment to these areas are two reasons these regions were so agriculturally productive.¹⁷ Such regions became hotspots of settlement during the late 18th and 19th centuries as east coasters rushed over the Appalachians to stake their claim in these newly acquired lands. Farmers were producing excess crops within 3-4 years after plowing their fields.¹⁸ The dramatic profitability of the farming in this region only encouraged more people to head west and begin farming. Excess farm products eventually found their way to the cities like Cincinnati, which relied on such imports to feed its rapidly growing population. Butler County, which contains part of the Miami River Valley and is located just north of Cincinnati, would, in 1839 and 1859, lead the state in corn and oat production.¹⁹ Cincinnati greatly benefited from being surrounded by such productive farmland. Not only would the many products of these farms feed the city's hungry citizens, but they would supply the meatpacking industry with millions of pigs over the coming decades.

¹⁶ Gordon, *From Slaughterhouse*, 55.

¹⁷ Bennet, Amanda. "A Profile of Miami County Agriculture." OSU CFAES Extensions, <https://miami.osu.edu/node/328>

¹⁸ Preston, Daniel. "Reapers, Harvesters, and Steam Threshers: The Interdependence of Agriculture and Manufacturing in the Miami Valley." *The Journal of The Cincinnati Historical Society*, vol. 54, no. 1, (Spring 1996): 3-18., 3.

¹⁹ Preston, "Reapers," 4.

Western expansion was characterized by a unique method of frontier farming. Life on the edge of American society was challenging. The Appalachian Mountains isolated the Ohio River region from the coast, effectively cutting off early Ohio settlers from the wider world. Supplies, food, and protection were difficult to obtain so early farmers had to be adaptable and able to fulfill their many needs on their own. Farmers could not be bogged down by having to deal with a plethora of different crops to take care of or be stuck looking after defenseless farm animals. As such, these settlers developed the corn-hog method of agriculture.

Corn was an ideal candidate because it was not prone to disease and grew well in the region.²⁰ Corn's many uses meant it could be used for human consumption, given to animals as feed, refined into whiskey, and more. Hogs were described as being a "tool of empire" because they were often on the frontlines of western expansion as they were adaptable, hardy, and required minimal energy to rear.²¹ Hogs allowed farmers to gain a foothold in new territories through their ease of care and their ability to provide meat readily.

Growing corn and raising hogs provided frontier farmers with the highest caloric and economic payoff for the least amount of effort and money. The two went hand in hand as corn-fed hogs produced better meat.²² This benefit would come in handy as the pork-packing industry grew and people came to appreciate the fine taste of Cincinnati pork. For personal consumption farmers would grow gardens but most of their farm was dedicated to growing corn. Additionally, farmers could save a significant amount of time and labor by letting hogs run wild in the forests and fields of early colonial Ohio, then corral them into the corn fields in the fall where they

²⁰ Homenuck, Henry P. M. "Historical Geography of the Cincinnati Pork Industry: 1810-1883." Thesis, University of Cincinnati. The Cincinnati Historical Society Archives, Thesis f338.176 H765, 1965., 29.

²¹ Anderson, *Capitalist Pigs*, 10.

²² Homenuck, "Historical Geography", 16.

could “hog down” and tear through the corn while it was still on the stalk.²³ Such practices benefited the fields by reintroducing nutrients in the form of manure and leftover plant matter.²⁴ This manner of closed-loop agriculture ensured that the organic matter and nutrients provided by the soil was returned to it by the end of the season. This organic waste helped to keep the fields healthy and able to supply the farmers with the crops they needed. The corn-hog method was so common that an Indiana newspaper in 1824 wrote, “The principal object pursued at this time, is to raise a crop of corn and a great number of hogs, which embraces almost entirely the whole surplus of the country.”²⁵ The same could be said of Ohio. Farmers used the corn and hogs to feed themselves and their families and sold the excess.

Changes in population dynamics and environment that began with the first settlers moving into the region and continuing throughout the 19th century caused shifts in farming practices, which would intensify the corn-hog style of agriculture. Much of Ohio was once covered by a thick layer of forests. These forests, sculpted by nature and Native Americans, provided many goods to early settlers. However productive these forests were, they were sidelined by traditional European styles of agriculture, which required the clear-cutting of acres upon acres of forests. As forests shrunk, they became less able to properly feed the growing droves of pigs which were traditionally let loose to feed upon the fruits of the forest. Decreases in masts (the nuts and fruits produced by trees and shrubs) forced farmers to intensify their production of corn and other feed. Increasing Euro-American population and farm sizes forced farmers to increase how much energy they directly devoted to hogs. Laws passed in the early

²³ Anderson, *Capitalist Pigs*, 45.

²⁴ Anderson, *Capitalist Pigs*, 45.

²⁵ Anderson, *Capitalist Pigs*, 17.

1800's required farmers to build fences to keep their pigs in rather than keep them out.²⁶ As more people moved into the region, the gaps between farms shrunk. The pigs that had once been free to roam the countryside were now foraging in their owner's neighbor's fields, causing a significant amount of strife within farming communities. Enclosing the hogs year-round meant that farmers now had to feed their hogs year-round, which mean more land was dedicated to the cultivation of corn.

This mode of agriculture was sweeping through the Cincinnati-region right as the city was beginning to invest in meatpacking facilities, providing Cincinnati packers with a competitive advantage over other, east coast packing facilities by having easy access to the huge reserves of Midwestern hogs. While many farmers would slaughter, pack, and sell their own hogs during the late 18th and early 19th century, it would eventually become more efficient to drive their hogs to a designated packing center, such as Cincinnati.

The early decades of the 19th century saw extensive hog drives across county and state lines as farmers sold their fattened swine to the nearest meatpacking facility. Hog drives occurred towards the end of the harvest season, before frost set in, and involved farmers and farmhands herding their droves of pigs to a meatpacking facility.²⁷ The swarm of pigs would kick up thick clouds of dust; resembling the cattle drives that would crisscross the western plains in a few decades. Some traveled as long as twenty days to reach Cincinnati. Along the way they would stop at taverns where the innkeepers would not only supply the men with a place to sleep and with food to eat, but their hogs with corn as well.²⁸ Local economies were built upon these

²⁶ Bidigare-Curtis, Hannah. "A New Approach to Ohio Pig Farming." *Inquiries Journal*. Discussions, March 1, 2014. <http://www.inquiriesjournal.com/articles/966/a-new-approach-to-ohio-pig-farming>.

²⁷ Anderson, *Capitalist Pigs*, 108.

²⁸ Anderson, *Capitalist Pigs*, 108

hog drives. A.J. Lutes, a farmer and resident of Ross Township (located 15 miles north of Cincinnati) remarked in his diary how the small village of Venice, Ohio capitalized on the hog drives and its location by constructing multiple inns to house farmers on their annual commute to the city.²⁹ Having access to such facilities made the trip easier and more profitable for the farmers, encouraging the continued driving of hogs to the city while stimulating local economies. A.J. Lutes' diary provides a look into the thoughts and opinions of an early 19th century Ohio farmer. Throughout his diary he writes of produce and pigs, remarking on their quality and quantity. In one entry, he transcribes his encounter with a deformed pig, reading,

April 8th (1847) I saw a pig with two feet on each leg or four claws on the ground; but it lacked an inside claw on the inside leg just above the foot. The pig's mother had the same kind of feet.³⁰

It is unknown whether that hog ever made it to Cincinnati or if it remained on the farm. While most of his diary is dedicated to the recording of farm-related chores and taking stock of farm goods, he recorded a portion of his opinions on subjects such as moon farming, the practice of performing certain tasks in alignment with different phases of the moon, and religion. Of the practice of moon farming, Lutes largely rejected the premise but wondered what affects the moon might have on masonry.³¹ Lute's writings show that farming, even in 19th century Ohio, was still heavily influenced by traditional systems of agriculture and nature during a time when the ideas of the scientific method and optimization were influencing many aspects of urban and rural life.

²⁹ Righter, Richard Lutes. "The Diary of A.J. Lutes: A Mid-Nineteenth Century Ohio Farmer." *The Journal of The Cincinnati Historical Society*, vol. 49, no. 1, (Spring 1997): 3-19., 15.

³⁰ Righter, "The Diary," 16

³¹ Righter, "The Diary," 7

By 1815, trends in the corn-hog method were beginning to have a significant economic impact on the city as pork, bacon, and lard became second only to flour as Cincinnati's leading export.³² The plantation South and urban Northeast had the highest demands for Cincinnati's pork products.³³ Both regions had large labor forces that required lots of cheap food.

However, environmental factors alone would not transform Cincinnati into Porkopolis. Standardization and improvements in the meat-packing process were essential in propelling the city forward as a meat-packing power and in maintaining its status for decades until the Civil War.

Prior to 1818 most of the meat-packing industry in Cincinnati was rather informal. Some farmers drove their hogs into the city to be slaughtered and others killed and processed their swine at the farm then sent the meat into town. The first full-time pork packer in Cincinnati was Elisha Mills, who in 1818, established the first meat-packing facility in the city.³⁴ Others would quickly follow in his footsteps. With the construction of meatpacking facilities came increased production capabilities. This in turn called for more hogs to be packed, which then encouraged the further expansion of the city's meatpacking facilities. Over the next two decades the city would witness dramatic growth in the number of pork-packing plants. The numbers would fluctuate from year to year, but the city would house anywhere between 26-42 pork-packing facilities between 1844 and 1859.³⁵ Each of these plants was capable of processing hundreds of hogs a day. The Mill and Deer Creeks would become home to dozens of slaughterhouses while

³² Gordon, *From Slaughterhouse*, 55.

³³ Gordon, *From Slaughterhouse*, 55.

³⁴ Homenuck, "Historical Geography," 30

³⁵ Homenuck, "Historical Geography," 47

the banks of the Ohio River would house several packing facilities where the slaughtered pigs would be processed in barrels and then rolled onto steamships.

The meat-packing industry was constrained temporally by the local climate. The slaughter and packing of swine could only begin once temperatures had reached freezing, meaning slaughterhouses and packing facilities had a narrow window between mid-November and mid-February to pack as many pigs as possible.³⁶ Freezing outdoor temperatures were the only way to keep meat fresh in the pre-refrigeration era. The cold froze the meat, stopping it from going bad, and gave packers enough time to cure and pack the meat. The lack of flies during the winter months would have been beneficial as well. With thousands of pigs pouring into the city, the slaughterhouses were running constantly during the cold winter months. Finding seasonal labor for the slaughter and packing houses was not a challenge. The cold winter months left the region's many farmers with little to do so, eager to earn some extra cash, hundreds of farmers enlisted to help in the slaughter and packing of pigs.³⁷ Many of these farmers took care of their pigs from porcine cradle to grave. This short window for business meant packers had to be incredibly efficient in their processing of pork. These environmental limits encouraged business owners and inventors to look for new ways to enhance their businesses.³⁸ The demand for innovation would only grow as Cincinnati and its meat-packing industry expanded.

By the 1820s Cincinnati was beginning to make a name for itself not only as the pork-packing capital of the nation, but of the world.³⁹ There were mixed feelings about this process as the industry brought in vast amounts of wealth and encouraged entrepreneurship and innovation

³⁶ Hedeem, *The Mill Creek*, 75.

³⁷ Anderson, *Capitalist Pigs*, 111.

³⁸ Becker, Carl M. "Evolution of the Disassembly Line: The Horizontal Wheel and the Overhead Railway Loop." *The Journal of The Cincinnati Historical Society*, vol. 26, 1968., 278.

³⁹ Anderson, *Capitalist Pigs*, 23

as well as contributing significant amounts of pollution and environmental degradation. For better or worse, pigs became synonymous with Cincinnati as the industry grew. Alexander Lakier, a Russian traveler who wrote about his journeys through America in 1857, wrote about his experience stepping off the boat on the banks of the Ohio and walking into the city writing that, “The first thing I came across on the solid ground was a large sow with a full litter of suckling pigs. It was obvious that she did not come here by chance and that she was accustomed to being here.”⁴⁰ Cincinnati had become a home for pigs just as much as it was a home for people.

Porkopolis and its Effects on Cincinnati, both Industrial and Environmental

The city would earn the nickname of Porkopolis in 1825 in part due to the pride George W. Jones, president of the United States branch-bank in, felt for his city. He had written many letters to a correspondent in Liverpool about how pleased he was of his city’s meat-packing industry, which had packed 40,000 hogs that year.⁴¹ After a few of these exchanges, the correspondent sent a pair of paper mâché hogs to Jones addressing them to “George W. Jones, as the worthy representative of Porkopolis.”⁴² From that day forward, the city and its pigs became entwined. Many Cincinnatians shared Jones’ pride in their industry. An anonymous quote from the second half of the 19th century applauded the city and its industry highlighting not only the positive feelings towards meatpacking but also the shared belief that Cincinnatians had perfected it, “It was Cincinnati that originated and perfected the system which packs fifteen bushels of corn

⁴⁰ Schrier, Arnold. “A Russian Observer's Visit to ‘Porkopolis’ 1857.” *The Cincinnati Historical Society Bulletin* 29, no. 1-4 (1971): 29–51., 33.

⁴¹ Gordon, *From Slaughterhouse*, 55

⁴² “Leading Manufacturers and Merchants of Cincinnati and Environs. The Great Rail Road Centre of the South and Southwest.” (1886) International Publishing Co. [277 p. illus. 25 cm.] (GENERALff917.714 L434). *Cincinnati Historical Society Archives*, Cincinnati Museum Center., 34.

into a pig, and packs that pig into a barrel, and sends him over the mountains and over the ocean to feed mankind.”⁴³

Immigration patterns during the first half of the 19th century also played a role in patterns of consumption in the city. Rapid growth, encouraged by economic stability which was in part supported by the meat-packing industry, created dramatic changes within the city. By 1850, the city’s population had doubled each decade for the five previous decades. 40% of the city’s population was either German born or the children of German expatriates.⁴⁴ The portion of the Miami and Erie Canal that runs through the city had a large population of Germans living near it and was subsequently nicknamed the Rhine, and the name has stuck as the neighborhood is still known as Over-the-Rhine. Such rapid growth undoubtedly put strains on the city and its public services. This large influx of Germans influenced Cincinnati culture in more ways than just the names of neighborhoods. Germans were noted to prefer pork over beef more so than other ethnic groups.⁴⁵ They also supplied much of the labor for the industry as up until the early twentieth century, after a series of strikes in which they were replaced by Slavic women, many who worked at pork-packing and sausage-making facilities were either German born or of German descent.⁴⁶ Their culinary knowledge related to porcine products helped secure themselves a job while boosting the productivity and efficiency of the city’s pork-packing facilities. Cincinnati was filled not only with pork packers, but with pork enthusiasts. Easy access to and an affinity for pork shared by most of the population reshaped the diets of the citizens. The Russian traveler Alexander Lakier noted that, “not a single meal in a hotel is without its [pig] meat in various

⁴³ “Cincinnati: Quotations Concerning Pigs, Lard and Legacy.”

⁴⁴ Stradling, *Cincinnati*, 31.

⁴⁵ Anderson, *Capitalist Pigs*, 23.

⁴⁶ Commons, John R. “Labor Conditions in Meat Packing and the Recent Strike.” *The Quarterly Journal of Economics* vol. 19, no. 1 (1904): 1–32. <https://doi.org/10.2307/1884862>.

forms and preparations.”⁴⁷ Goetta, a meat and grain-based breakfast item, was popularized by German immigrants living in Cincinnati and is still a popular breakfast dish today.

Pigs were more than a mere source of food and revenue for Cincinnati. Throughout history, pigs have been known for their garbage-consuming abilities as cities often employed them as makeshift garbage disposals.⁴⁸ Cincinnati was no different. Many thanked Cincinnati’s general downhill slope towards the river and its herds of swine for keeping the city clean.⁴⁹ What rain could not carry downhill into the river, the pigs ate. Frances Trollope, a British writer who detailed her journey across the U.S. in her book *Domestic Manners of the Americas*, said that, “the pigs are constantly seen doing Herculean service in this way through every quarter of the city...”⁵⁰ This service being performed was the act of eating the garbage that had been thrown into the street.

The role pigs played in the city’s wellbeing can also be seen below in Mosler’s painting *Canal Street Market* (Figure 1), where the pig is featured front in center, eating the remnants of an unwanted watermelon. Henry Mosler was a painter who moved with his family from Prussia to Cincinnati in the mid-1800s, where he observed and painted the daily life of the city’s people.⁵¹ The pig in the painting is seen amongst the people of the crowded marketplace, neither the pig worrying about the people nor the people about the pig. The pig in Mosler’s painting is as

⁴⁷ Schrier, “A Russian,” 35

⁴⁸ Anderson, *Capitalist Pigs*, 83

⁴⁹ Steen, Ivan D. “Cincinnati in the 1850’s: As Described by British Travelers.” *The Bulletin of the Cincinnati Historical Society*, vol. 26, 1968., 262-263.

⁵⁰ Hand, Greg. “A Brief History of Garbage in Cincinnati.” *Cincinnati Magazine*, September 29, 2020. <https://www.cincinnatiimagazine.com/article/a-brief-history-of-garbage-in-cincinnati/>.

⁵¹ “Henry Mosler behind the Scenes: In Celebration of the Jewish Cincinnati Bicentennial.” Cincinnati Art Museum. Accessed December 10, 2022. <https://www.cincinnatiartmuseum.org/mosler>.

much at home here as the humans are. Mosler portrays the pig eating refuse, probably an active choice in order to describe the important role the city's swine played in keeping the city clean.

In addition, hogs offered entertainment as children were often seen trying to ride the pigs through the streets!⁵² Pork itself was so valued by the people of the region that it could act as a stand-in for money.⁵³ People could buy groceries, salt, or even land with the right pork products.



Figure 1, Mosler, Henry, "Canal Street Market," oil on canvas, 1860, Cincinnati Museum Center, Cincinnati.
<https://tinyurl.com/yckrj6vu>

While many residents respected the pigs for their economic value others could not stand their presence. Many visitors to the city were shocked and appalled by the scale at which pigs claimed the city as their own. The title of Porkopolis was both an honor and a disgrace, depending on who you asked.

⁵² Hurt, "Pork," 198.

⁵³ Hurt, "Pork," 193

By the 1850s, the illustrious reputation of Cincinnati as a center of industry and commerce brought in many outsiders who were eager to observe the prosperous young city whom many called the Queen City of the West. Many, like Nicholas A. Woods, found only swine, lamenting that, "...the very gutters are congested with them, as the dull monotony of pigs is visible everywhere."⁵⁴ Woods was a correspondent of *The Times* of London who was accompanying the Prince of Wales, Albert Edward, who was traveling around Canada and the United States in 1860. Knowing that pigs were present in all cities up until a few decades ago, Wood's written remark, given that he most likely had seen a similar phenomenon in the cities of Great Britain, highlights just how many pigs there were in Cincinnati at the time. Frances Trollope wrote that her strolls through the city were always interrupted by "my old Cincinnati enemies, the pigs."⁵⁵ Industrial Britain benefited from Cincinnati's pork empire both from its meat and engine-lubricating lard oil. One lard refinery supplied an English wool mill with 16,000 barrels of lard in 1842, no small amount.⁵⁶ Britons loved the pork-related products of Cincinnati but hated seeing how "the sausage got made".

An American by the name of Cyrus P. Bradley wrote extensively about the corn-hog farming of the new western states and the dismal condition in which he found Cincinnati around the year 1835. His journey to Chillicothe, Ohio tells of how the corn-hog farming had pervaded the entire region, saying that the entire State is "defiled by swine" and that the streets have the "smell and appearance of a pig-yard."⁵⁷ Chillicothe, which is roughly 85 miles from Cincinnati, was fully enthralled in the industry of pork-rearing it seems. Bradley's claim of the state being

⁵⁴ "Cincinnati: Quotations Concerning Pigs, Lard and Legacy."

⁵⁵ Anderson, *Capitalist Pigs*, 114.

⁵⁶ Gordon, *From Slaughterhouse*, 58.

⁵⁷ Bradley, Cyrus P. "Journal of Cyrus P. Bradley." *Ohio History Journal Archive*. Ohio History Connection, 1835. <https://resources.ohiohistory.org/ohj/search/display.php?page=54&ipp=20&searchterm=Array&vol=15&pages=207-270>. 232.

overrun by pigs was not too much of an exaggeration when one looks at the map (Figure 2) which shows the density and distribution of hogs in 1860. Although the data from the map is from 25 years after Bradley’s account, the map shows that the trends he witnessed in 1835 had only intensified. Ohio itself did not have the largest number of hogs in 1860, coming in 6th for total number of hogs, suggesting that the westward shift of corn-hog agriculture was beginning to take place and was leaving Ohio behind to find purchase in newer, more western states such as Indiana, Illinois, and Missouri.

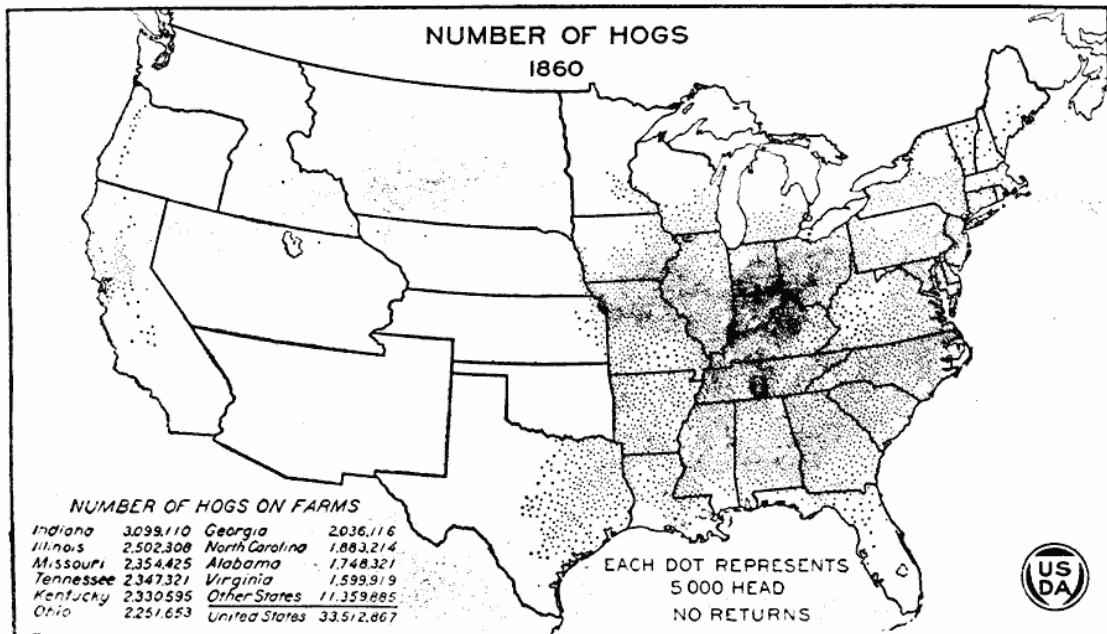


Figure 2, United States Production of Hogs, 1860. United States Department of Agriculture Yearbook 1922 (Washington, DC: Government Printing Office, 1923) 190. Courtesy the private collection of Roy Winkelman. <https://etc.usf.edu/maps/pages/100/160/160.htm>

Bradley’s writings help to paint a picture of the region at the time: Ohio was dedicated to pork-packing. He goes on to write about his stay in Cincinnati during which his opinion of the pigs only worsens. He calls them “impudent” and filthy and tells of how pedestrians are always forced to give way to a drove of pigs or else risk being trampled.⁵⁸ Bradley’s writing paints

⁵⁸ Bradley, “Journey of Cyrus P. Bradley,” 219

Cincinnati as a city whose citizens are ruled by pigs. The hogs that would have been residing in the city would not be frail, hungry swine, but massive well-fed pigs with an even bigger appetite.

In the morning paper I saw a notice of one of these ravenous beasts seizing a young child by the arm, tearing him from his mother's doorstep into the gutter, where, had it not been for the child's screams and the interference of a gentleman, he would inevitably have devoured it. This was a little too bold.⁵⁹

If that article was true, it repaints accounts of children riding pigs not as playful school kids but as life-risking thrill seekers.

The middle of the nineteenth century saw huge economic growth in Cincinnati. Meatpacking, the meatpacking byproduct industry, and other industrial fields grew in output and paved new paths in innovation. Isolation created by the Appalachians raised prices for manufactured goods and had played a role in encouraging Cincinnatians to become self-sufficient for their industrial needs.⁶⁰ It was during this time that Cincinnati, fed by the pork-industry, transformed into an industrial powerhouse.

The pork-packing industry grew throughout the decades. "Visitors reported that a seemingly never-ending stream of pigs were herded into the large wooden slaughter-houses..."⁶¹ In 1840 there were 48 meatpackers employing 1,200 workers, who packed anywhere between 400,000 to 500,000 hogs a year.⁶² Meatpacking had become a standardized and efficient system in order to meet these huge demands in three months. Disassembly lines, where each worker performed one specific task in the pork-packing process, such as killing the hog, removing bristles, or chopping off appendages (essentially the opposite of an assembly line), could take

⁵⁹ Bradley, "Journal of Cyrus P. Bradley", 221

⁶⁰ Stradling, *Cincinnati*, 16.

⁶¹ Steen, "British Travelers," 274

⁶² Stradling, *Cincinnati*, 53.

apart 180 hogs per hour.⁶³ An English observer in 1855 noted that, “from the moment piggy gets his first blow till his carcass is curing...not more than five minutes elapse.”⁶⁴ The chopping of cleavers rang out continuously throughout the kill floor without pause each workday. Such blinding speed, while still performed by manual labor, precluded the rapid mechanization that would occur throughout many industries in the 19th century. The dimensions of the facilities themselves were just as impressive as the streamlined process that occurred inside them. Slaughterhouses in the 1850s could take up two acres and reach four stories high. Pigs would be driven to the top floor where they would receive the killing blow; after which they would be carried down the floors from one processing station to another.⁶⁵ Henry Farny’s depiction, seen in Figure 3, of the pork slaughter, packing, and lard-making process displays the lard-making

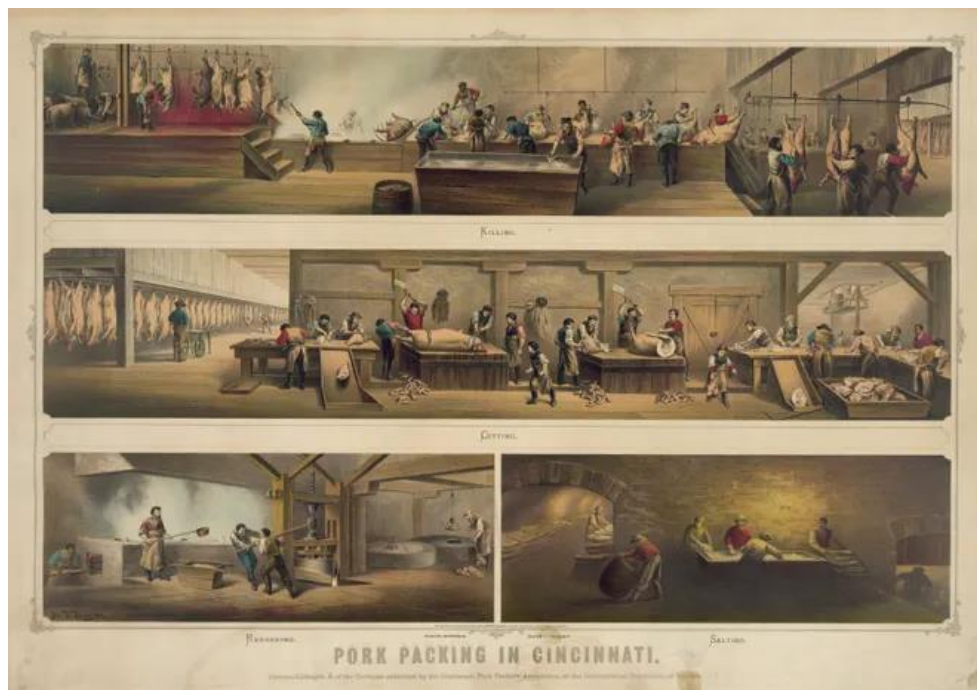


Figure 3, Farny, Henry Francois, “Hog-slaughtering and pork-packing in Cincinnati,” Cincinnati & Hamilton County Public Library, Cincinnati. <https://tinyurl.com/yckrj6vu>

⁶³ Stradling, *Cincinnati*, 53.

⁶⁴ Anderson, *Capitalist Pigs*, 113.

⁶⁵ Anderson, *Capitalist Pigs*, 115

process displays the regimentation of labor and the scale of carnage performed on a daily basis. While Farny does not shy away from including blood in his portrayals of the packing process, it is likely significantly less than what the actual process would entail. Prior to the 1860s, workers carried the carcasses from one station to another. However, with the advent of the overhaul railway loop, this transportation process was mechanized.⁶⁶ Farny's lithographs display the use of this railway loop, an invention that allowed workers to focus more on chopping up the pig and waste less energy carrying it. Using the pig's own energy to bring them up, and gravity to bring them down saved packers time, money, and energy.

While the pork-packing industry was able to find use for many portions of the pig, much of the carcass was still left over. These left over pieces might have gone to waste (thrown into the river), but entrepreneurial-minded individuals found new ways to make use of almost every portion of a pig. Bristles became brushes, bones were whittled into buttons, blood was used for inks and chemicals, bladders became waterskins and containers for lard, and the hide was tanned or melted for glue.⁶⁷ In many ways the resourcefulness of the early farmers lived on in the inventive salesmen who were able to make use of seemingly useless byproducts. As Porkopolis developed, the byproduct industry grew and became just as valuable as, if not more valuable than, the meatpacking industry itself.

By far the most valuable byproduct was lard, a substance that had been essential to cooking for centuries. The uses for lard expanded beyond just cooking during the nineteenth century. Lard was so popular that some businessmen active in the lard industry believed that pig lard could supplant whale oil as a major light source and machine lubricant, even referring to

⁶⁶ Becker, "Evolution," 278

⁶⁷ Gordon, *From Slaughterhouse*, 62.

pigs as land whales, prairie whales, and Ohio whales.⁶⁸ To many it appeared that lard's success was without doubt, but there were a few reasons as to why lard never attained the financial success its backers had hoped for. One reason was Upton Sinclair's *The Jungle*, a fictional account of the conditions of contemporary meatpacking facilities in Chicago which was published in 1905. Sinclair writes about the lard-making process in grotesque and disturbing detail. This negative depiction hurt sales and changed people's perspectives of the product. P&G's creation of hydrogenated cottonseed oil, Crisco, then swooped in and supplanted lard as a culinary tool.⁶⁹ Crisco and *The Jungle* would not debut until the dawn of the twentieth century, meaning lard was still a beloved and trusted product during Cincinnati's heyday as a pork and lard producing center.

The first lard oil works in the city was founded by Fenno E. Tarrant in 1838.⁷⁰ In 1844 there were 20 lard factories in Cincinnati.⁷¹ By the 1850s there were 34 factories producing 1/5 of the nation's lard.⁷² Such rapid growth displays the astronomical demand for this product and Cincinnati's ability to provide. Cincinnatians not only built lard factories but improved them as well. In 1841, John Smith and Martin Shephard patented new processes that separated fats and oils from animal tissue.⁷³ This improved the production value and volume of the oils. The different oils could be used in the creation of different products, such as soap or candles. In 1844, Ebenezer Wilson created the Lard Rendering Tank which utilizes high temperature steam to melt lard and separate the lard fats and oils much more quickly and more successfully than other

⁶⁸ Anderson, *Capitalist Pigs*, 123.

⁶⁹ Smith, Robert. "Who Killed Lard?" NPR. NPR, February 3, 2012.

<https://www.npr.org/sections/money/2012/02/03/146356117/who-killed-lard>.

⁷⁰ Gordon, *From Slaughterhouse*, 57.

⁷¹ Gordon, *From Slaughterhouse*, 58.

⁷² Gordon, *From Slaughterhouse*, 58

⁷³ Gordon, *From Slaughterhouse*, 57.

methods.⁷⁴ Wilson's Tank significantly increased lard quantity and quality. Continuous developments in efficiency and production volume allowed the city's refineries to export even more product, bringing in huge amounts of revenue.

Cincinnati, with such a huge supply of lard, became the nation's leading producer of candles and soap. Stearin, one of the products of lard refinement, was used to make candles while red oil was used for soapmaking.⁷⁵ In 1846, only 2,708 boxes of soap were produced in Cincinnati, by 1860 85% of Ohio's and 17% of the nation's total candle, soap, and other lard-products came from Cincinnati.^{76 77} While the plentiful supply of swine helped foster the byproduct industry, the largest factors that drove its development were the inventors who discovered new and efficient ways of creating these products. Proctor & Gamble, now an international consumer goods company, got its start in Cincinnati and greatly benefited from the plentiful resources available. The pork industry directly supported other industries as well, such as barrel making, as barrels were the main mode of storage for such products. A whole range of industries, from those that made candle wicks to packaging all benefited from the pork and pork by-product industry. The importance of the pork and pork by-product industry is displayed in William H. Gothard's 1934 painting titled *Cincinnati Industries*, shown in Figure 4. The left half of the canvas is used to depict the pig-related industries of pork-packing, lard production, and soapmaking. It incorporates contemporary industries such as radio, pottery, and piano-making as well. It is a celebration of Cincinnati's industrial past and present and highlights the importance of the pork industry.

⁷⁴ Gordon, *From Slaughterhouse*, 58.

⁷⁵ Gordon, *From Slaughterhouse*, 60.

⁷⁶ Gordon, *From Slaughterhouse*, 61.

⁷⁷ Gordon, *From Slaughterhouse*, 63.



Figure 4, Gothard, William H., *Cincinnati Industries*, 1934, oil on canvas, Cincinnati Museum Center, Cincinnati.

Industry in Cincinnati was not limited to just pork products. Beer, machine tools, carriages, and more all became invaluable industries as well.⁷⁸ While pork-packing waned in the summer months, these other industries were busy year-round, “For in the middle of the 19th century visitors to the Queen City saw her wearing a crown of black smoke.”⁷⁹ Cincinnati had started off as a town of trade and commerce, but by the 1850’s it had become a town of industry and production as well. Cheap land, inexpensive power and transport, low construction costs, and reasonable costs of living all contributed to the expansion of manufacturing in the city.⁸⁰ Like in the other industries, manufacturing increased greatly in the mid-1800s. For example, 80% of Louisiana’s sugar-mill engines were produced in Cincinnati.⁸¹ The machine parts industry in Cincinnati would continue to be a vital part of the city’s economy, even decades after

⁷⁸ Stradling, *Cincinnati*, 51.

⁷⁹ Rothe, Bob. “Smoky Cincinnati? Even in the Mid-19th Century We Left A Bad Impression,” *The Cincinnati Enquirer*, May 4, 1970 p 3-B.

⁸⁰ Preston, “Reapers,” 14.

⁸¹ Morrison, Andrew. “The Industries of Cincinnati: Her Relations as a Centre of Trade; Manufacturing Establishments and Business Houses.” (1886) Metropolitan Publishing Co. [256 p. illus., pots. 23 cm.] (GENERALff917.714 M878). Cincinnati Historical Society Archives, Cincinnati Museum Center., 29.

pork-packing had fallen in prominence. In total, Cincinnati in 1850 would produce \$500,000 worth of agricultural tools, by 1860 that number was \$3,000,000, 1/6 of the national total.⁸² Midcentury Cincinnati was a major exporter in multiple fields of industry, it should then be no surprise that so many people felt that the city would undoubtedly become one of the greatest metropolises in the world. The city benefited from a symbiotic relationship between farmers and industrialists in that farmers provided the food for industrialists and their factory workers while the industrialists provided the farmers with new, mechanized farm tools with which they could grow more with less effort. Such industriousness brought the city and its people great wealth, but it also had its drawbacks, most significantly in its effects on the environment.

Prior to Cincinnati's founding and the expansion of the pork-packing industry, this area was renowned for its picturesque fields and forests, clean and fish-filled rivers, and fresh air. However, as the city and its industrial culture grew, even the ability of the pigs to consume waste was not enough to manage the heaps of pig and other waste clogging the streets. Resultantly, the region soon became infamous for its filth.

Much of the meatpacking industry came to lie against the banks of the creeks and canals that crossed through the city, as such they suffered the most from pollution. Clearwater Creek, which was given the name long before pork-packing dominated the city, was later nicknamed "Bubbly Creek" due to the gasses that arose from the waste and carcasses that dirtied its waters. The stench was so extreme that it was culverted into a sewer in 1863.⁸³ A similar fate would befall many other Cincinnati streams and canals as time went on. Deer Creek, one of the hotspots of slaughterhouses, became known as "Bloody Run" which British author Harriet Martineau said

⁸² Preston, "Reapers," 5

⁸³ Hedeon, *The Mill Creek*, 78

was “little more than a channel through which their [the pigs’] blood runs away.”⁸⁴ The decomposition of blood uses up a significant amount of oxygen, reducing the amount of dissolved oxygen available of aquatic animals.⁸⁵ The massive amounts of blood that poured into the creeks suffocated many species of fish and invertebrates. Deer Creek was also described as being an “infernal stinkhole” by a city councilman.⁸⁶ The blood and entrails of hundreds of pigs could be seen drifting down these streams throughout the packing season. Lakier writes,

This was the so-called Deer Creek, and I could not but express surprise at the sight of the bloody, or more accurately, opal-white color of the water, which was sharply distinguished from the yellow water of the Ohio.”⁸⁷

The excessive addition of animal carcasses and industrial waste had painted the creek a ghostly white. The extent of the destruction of these streams must have laid heavily on the minds of passersby. However, none were willing to challenge the business for the sake of the environment as “...many civic leaders dismissed such nuisances as ‘necessary evils of the business.’”⁸⁸

For city and business leaders, if the item (in this case, clean streams) could not have a dollar value placed upon it, then it must fall to the wayside to make room for something productive (in the traditional sense of production and profit). The Cincinnati Chamber of Commerce would say of Mill Creek in 1914 that, “The dirty fetid stream of today is the martyr of the onward progress of civilization.”⁸⁹ Sentiments such as this accept and embrace environmental degradation as a fact of life. However, nature is more than just a backdrop for human development. Nature shapes humanity as much as the inverse is true. While

⁸⁴ Stradling, *Cincinnati*, 52.

⁸⁵ Bach et al., *Ecology*

⁸⁶ Rothe, “Smoky Cincinnati,” 3-B

⁸⁷ Schrier, “A Russian,” 37

⁸⁸ Gordon, *From Slaughterhouse*, 61.

⁸⁹ Bach et al., *Ecology*

slaughterhouses might have exploited streams, those businesses would not have existed without the streams; which is nature's way of shaping the economic and social layout of humanity. The pork industry made Cincinnati rich, but it did so at the expense of its forests, fields, and rivers.

More than pigs' blood ran through these waters. Breweries, paper-mills, lard refineries, and starch-factories also lined the banks of these rivers, releasing chemicals and hot water back into the creeks.⁹⁰ Thousands of gallons of hot water and waste created by lard production and other industries were poured into these creeks.⁹¹ Joseph James writes of degradation of the Mill Creek saying,

In the early days its waters were pure, and swarmed with fish of many kinds, but, with the growth of a great city along its banks and about its mouth, its waters have become so defiled as scarcely to permit the existence in them of any living thing. Breweries, glue factories, distilleries, stock-yards and slaughter-houses, empty their refuse into its waters; and these, with numerous city sewers, have made the name of Mill Creek synonymous with foul smells and turbid waters.⁹²

The sheer volume and toxicity of the items dumped into the creek had rendered it nearly lifeless. The addition of these industrial waste products would have altered stream temperature and chemistry, reduced plant and animal biodiversity, and stained the water and soil. The effluents from tanneries were said to have blackened creek beds to an extent that they became ““a stream of ink.””⁹³ These putrid additions converted the streams from pleasant brooks to disgusting and surely dangerous rivers of sludge.

Pollution on such a scale made these areas undesirable places for living. Two predominantly Black neighborhoods were found in these areas. Bucktown, or The Bottoms, sat next to polluted Mill Creek and Little Africa lay next to the Ohio River, which flooded the

⁹⁰ King, Moses. *King's Pocket-Book of Cincinnati*. Rand, Avery & Co. Printers, Boston. 1880 (917.714 K53 c.2). 52-53.

⁹¹ Hedeem, *The Mill Creek*, 81.

⁹² Bach et al., *Ecology*

⁹³ Hedeem, *The Mill Creek*, 80

neighborhood often.⁹⁴ Racism and housing discrimination undoubtedly played a role in assigning African Americans to these undesirable locations.⁹⁵ The Irish were often found in similar living situations, cramped along the foul-smelling waterways of the city.⁹⁶ While the poor and discriminated against were pushed down towards the banks of polluted waterways, the rich moved uphill, establishing the neighborhoods of Mount Auburn, Clifton, Avondale, and more to escape the stench and struggles of city life.⁹⁷ While those with the means have always tried to separate themselves from the unpleasantness of city life, trends in the latter half of the 1800s and throughout the 1900s caused this divide to widen. Pigs and the pork industry seemed to have played a role in this trend of racial and class divisions in Cincinnati.

The pollution of Cincinnati's waterways was a serious public health issue. While the sight and smell of such putrid waters would have been upsetting, the waterways of Cincinnati had dangerous potential as well. Just as the canals and streams had come to carry effluent from the city, these same waters now carried various dangerous pathogens that seeped into the city's drinking water. Cholera, caused by the water-borne bacteria *Vibrio Cholerae*, swept through the city many times throughout the nineteenth century. In 1832 and 1849 the disease killed 4% of the city's population.⁹⁸ A.J. Lutes writes about the epidemic, saying of the 1849 outbreak, "June 13. '49 Cholera very bad in Cincinnati broke out some 2 months ago."⁹⁹ Although short, Lute's entry stresses the sudden voracity of the disease as it makes its way through the city. While the disease

⁹⁴ Stradling, *Cincinnati*, 28.

⁹⁵ Beech, Peter. "What Is Environmental Racism and How Can We Fight It?" World Economic Forum, July 21, 2020. <https://www.weforum.org/agenda/2020/07/what-is-environmental-racism-pollution-covid-systemic/>.

⁹⁶ Dunlevy, Megan. "Cholera and the Queen City." *The Irish in Cincinnati*. University of Cincinnati, April 13, 2022. <https://libapps.libraries.uc.edu/exhibits/irish-cincinnati/cincinnati-irish-births-and-deaths/cholera-and-the-queen-city/#:~:text=Cincinnati%20had%20seen%20epidemic%20levels,by%20cholera%20contamination%20in%20water%20ways.>

⁹⁷ Stradling, *Cincinnati*, 37.

⁹⁸ Dunlevy, "Cholera"

⁹⁹ Righter, "The Diary," 14

and its outbreaks cannot be attributed to the pork-packing industry directly, it does show how unsanitary the city's drinking water was and the heavy toll placed upon the populace by industrialization.

Not only did the pork industry contribute to this stench, but locally owned pigs themselves produced a massive amount of waste. A Covington baker by the name of John Steinhauser was arrested in July 1879 for the nuisance his pig pen caused.¹⁰⁰ The fact that Steinhauser's neighbors reported him to the authorities for the stench of his pig pen shows just how rancid the excrement was, even for just a handful of hogs. A 200-pound hog can produce 17 pounds of manure and 3 gallons of urine a day.¹⁰¹ Considering that during the 1860s the city was processing some 500,000 hogs annually (and assuming all these hogs produced the amount of waste listed above), there were roughly 773,500,000 pounds of feces and 136,500,000 gallons of urine flowing through the streets and streams of Cincinnati from mid-November to mid-February. The numbers listed are a theoretical amount of waste produced, but it does give a glimpse into the sights and smells witnessed by Cincinnatians. While the smell would have been bad regardless of the season, the cold temperatures would have limited the rate of growth for odor-causing bacteria, saving the people some suffering during the peak packing season.¹⁰² Contemporary studies regarding modern, medium to large hog farms found that those who lived near such buildings experienced higher levels of exhaustion, anger, and confusion.¹⁰³

¹⁰⁰ "News From Points Around: Newport," *The Cincinnati Daily Star*, July 09, 1879, Newspapers.com <https://www.newspapers.com/>.

¹⁰¹ Anderson, *Capitalist Pigs*, 202.

¹⁰² Cosmas, Alex. "Why Odors Get Worse As Weather Warms." ECOSORB: Natural Industrial Odor Solutions. May 16, 2019. <https://doi.org/https://tinyurl.com/yw4wkrx>.

¹⁰³ Anderson, *Capitalist Pigs*, 207.

Cincinnatians probably experienced some of these effects given their close proximity to thousands of pigs year after year.

Within a few decades, Ohio was transformed from a landscape of forests and fields to one of farms and cities. Forests were clearcut to make room for farms and pastures. The corn-hog method of farming undoubtedly played a role in Ohio's deforestation. Acres upon acres of land were dedicated to rearing hogs, as well as more for land intended to supply the direct dietary needs of people. Roughly 5.6 pounds of corn are needed for 1 pound of pork.¹⁰⁴ Cyrus P. Bradley, the American traveler who wrote of pig-overrun Cincinnati, states that farms in the state were able to get 50-70 bushels of corn per acre.¹⁰⁵ A bushel of corn weighs 56 pound.¹⁰⁶ By that estimate, Ohio fields were producing 2,800lbs to 3,920 pounds of corn/acre. Modern estimates state that a pig will eat 1.4-4 pounds per day while nursing (6-8 weeks), and in order to reach a market weight of 280 pounds a pig will eat 6-10 pounds of feed a day for an additional 17 weeks.¹⁰⁷ Therefore, one pig could eat roughly (taking the average daily amount of 3 pounds for the first 7 weeks and 8 pounds for the following 17) 1,099 pounds of corn feed, or 19.6 bushels. This is not even accounting for the nutrients needed while nursing. Such huge demands required intense farming every single year.

These agricultural demands weighed heavily upon the soils of Ohio, which were slowly sapped of nutrients and degraded. An Iowa farmer, concerned about the state of farming, noted

¹⁰⁴ Goering, Albert W., "Operating A Small Modern Pork Packing Plant." Bachelor of Science in Commerce Thesis, University of Cincinnati, 1928. The Historical Society of Cincinnati Archives, Thesis f664.902 G597. 16.

¹⁰⁵ Bradley," Journal of Cyrus P. Bradley," 233

¹⁰⁶ Lindsey, Alexander J. "Bushels, Test Weights, and Calculations." Ohionline, CFAES, 26 Dec. 2018, <https://ohionline.osu.edu/factsheet/agf-503#:~:text=To%20facilitate%20the%20trading%20of,bushel%20weights%20of%2060%20pounds.>

¹⁰⁷ "Life Cycle of a Market Pig." Pork Checkoff. National Pork Board, June 10, 2021. <https://porkcheckoff.org/pork-branding/facts-statistics/life-cycle-of-a-market-pig/#:~:text=The%20life%20cycle%20of%20a,of%20up%20to%20280%20pounds.>

that if one is to focus on hog production then he must focus on corn production, “from year to year, which will soon exhaust even the rich soil of Iowa.”¹⁰⁸ This same concern is applicable to the hog farming that took place in Ohio, which would have devastated the soil. It is unlikely that the “hogging down” method of feeding used by early farmers would be enough to retain the nutrients needed for the soil by the 1860s which had seen decades of non-stop, intense agriculture.

The End of Porkopolis and its Legacy in Cincinnati

For 40 years Cincinnati remained a leader in pork and pork by-product production. However, the Civil War, shifts in transportation and farming, and increased competition would eventually dethrone the city as the top pork-packer. While it might have fallen from being the leader in pork production by 1865, the city continued to innovate and grow in new ways, leaving a legacy that is still celebrated today.

By the 1850s, railroads were crawling their way across the country, transporting people and goods faster and in greater volumes than ever before. Railroads eventually began making their way across Ohio. These rails shipped goods and people in numbers and at speeds never seen before, completely rewriting the concept of trade and travel. In 1842, 11% of Ohio’s hogs were shipped east, by the 1850s it grew to 15%, and by 1860, 22%.¹⁰⁹ Eastern and Chicago packers, thanks in part to rail transport, had become competitive with Cincinnati’s many meatpackers.¹¹⁰ Cincinnati’s pork production would continue to grow throughout the years, but was unable to keep pace with other regions.

¹⁰⁸ Anderson, *Capitalist Pigs*, 23.

¹⁰⁹ Walsh, *The Rise*, 49.

¹¹⁰ Walsh, *The Rise*, 45.

Ohio rails also altered farming practices, which lessened the supply of corn and hogs readily available for Cincinnati packers. Higher taxes, induced by the installation of railroads, encouraged farmers to begin growing crops other than corn, such as wheat.¹¹¹ A.J. Lutes, the Ross County farmer who described farm life in midcentury Ohio, lamented the loss of foot traffic induced by the rails, which replaced local roads and business.¹¹² The hog drives that had once supported Venice, Ohio gave way to trains. The inns and general stores which had once housed and fed farmers as they drove their hogs towards Cincinnati were left dilapidated and unused. The corn-hog method of farming which characterized much of the western frontier had extended beyond Ohio by the 1860s. New pork-packing cities would spring up west of Cincinnati and continue the legacy of hog farming elsewhere.

Chicago would be the heir to the title of Porkopolis after Cincinnati. The port connecting Lake Michigan to Chicago ensured that the city had access to plenty of capital and trade.¹¹³ Chicago benefited from the westward expansion of corn-hog agriculture in the same way that Cincinnati had 50 years prior. Chicago was connected to railways to a greater extent and much earlier than Cincinnati, which greatly helped it earn its claim to the pork market. By 1856, over 2,400 miles of rail ran through Illinois, connecting Chicago to farms across the state and beyond.¹¹⁴ Railroads would not become the main mode of transportation for goods entering or leaving Cincinnati until after the Civil War.¹¹⁵ In regard to rail connections Chicago was way ahead of Cincinnati. With that advantage Chicago was able to outcompete Cincinnati as a hub for pork and other goods. The canals which were so important to Cincinnati in the first half of the

¹¹¹ Anderson, *Capitalist Pigs*, 118.

¹¹² Righter, "The Diary," 15

¹¹³ Walsh, *The Rise*, 50.

¹¹⁴ Walsh, *The Rise*, 50.

¹¹⁵ Gordon, *From Slaughterhouse*, 56

century could not keep up with the rails. Not only was canal transport slower but it was seasonal in that freezing temperatures brought transportation to a crawl as the canal water froze. Henry Ford credited Chicago's pork disassembly line for inspiration in his design of an assembly line mode of production.¹¹⁶ However, this credit is not due to Chicago, but rather Cincinnati, whose brilliant inventors developed the disassembly line that fueled the city's economy for many years. Lake Michigan, rails, and a ready supply of hogs all helped Chicago's rise to pork-packing stardom, but it would not be until 1861, with the opening of the Civil War, that it would officially steal Cincinnati's title.

The Civil War closed off trade with the southern states. Prior to the war, Southern states purchased 1.2 of the 3 million hogs packed in the nation in the 1860-61 season.¹¹⁷ When this market closed, Cincinnati suffered. Southern markets had supported the city's growth throughout the years but now, with such a vital supply line cut off, Cincinnati was greatly hindered. Despite the economic toll inflicted upon the city by the trade embargo, Cincinnatians were quick to let go their old, southern clients. The city's government clear the prohibition of selling any product to the rebels, and any who dared to sell to them, "'deserves the doom of a traitor.'"¹¹⁸ While the Union Army would become the biggest buyers of pork during the years of the Civil War, most of this pork came from Chicago, which had the rail connections necessary to facilitate the transport of pork to the forts and frontlines of the war effort.¹¹⁹

The Civil War might have put an end to Cincinnati's reign as Porkopolis, but the city found some silver linings. Various machine-part making factories, which had sprung up in

¹¹⁶ Becker, "Evolution," 282

¹¹⁷ Anderson, *Capitalist Pigs*, 19.

¹¹⁸ Morrison, "The Industries of Cincinnati," 35

¹¹⁹ Anderson, *Capitalist Pigs*, 124.

Cincinnati as a result of the city's thriving economy, large workforce, and available capital, benefited from the war as they supplied Union armies with arms and munitions. Miles Greenwood, inventor of the first steam powered fire engine had a factory that built many items for the Union.¹²⁰ Business letters report of thirteen 12-pounder guns being ordered by the Union Army in Sept. 1862, as well as twenty-five carriages and twenty-five caissons for 12-pounders as well as four traveling forges.¹²¹ This was just one entry in a collection that spanned the duration of the war. Cincinnati's manufacturing capabilities were evidently important contributors to the war effort. While Cincinnati never boasted the largest factories of any given industry, it did represent a wide range of industries.¹²² Having a diverse economy, which had been created in part by the success of the pork industry and the readily available capital and workers which the industry supplied, ensured that Cincinnati could bounce back from economic downturn, even when its largest industry (meatpacking) was hindered by a wartime embargo. Other industries thrived alongside weapons manufacturers. P&G became a major supplier of soap for Union soldiers during the war due to their foresight and purchase of large quantities of rosin, a key component in soap making.¹²³ Union demand kept the young company in business during the war providing them with the capital needed for further expansion after the war. P&G would continue to grow even after pork byproducts became unessential to candle and soap making. Harley Proctor would name their white, vegetable oil-based soap "Ivory Soap" in 1879.¹²⁴ P&G would rise to national stardom with its household and industrial cleaning materials with Ivory Soap becoming a staple in every home within just a few years. Although Ivory Soap was not

¹²⁰ "Miles Greenwood." https://ohiohistorycentral.org/w/Miles_Greenwood

¹²¹ Miles Greenwood Collection, 1855-1883, n.d., Mss 976, Cincinnati Museum Center

¹²² King, *King's Pocket-Book*, 49

¹²³ Stradling, *Cincinnati*, 55.

¹²⁴ Lief, Alfred. *It Floats: The Story of Proctor and Gamble*. New York: Rinehart & Co, 1958., 6.

made from pork byproduct, it would not have come into being without the success of the pork industry in Cincinnati as P&G's early years were based upon that industry.

Chicago might have taken the title of Porkopolis but pigs still played a large role in the city's economy well into the 20th century. The Civil War might have cost Cincinnati the title of Porkopolis, but it did not stop the city from processing massive amounts of pork in the following years. By the 1870s, the city was processing upwards of 900,000 pigs.¹²⁵ Although centers of pig rearing and pork packing had shifted west, the city and the region were still producing significant amounts of pork. However, Cincinnati's productivity had fallen behind Chicago's. By 1900 Chicago had become surrounded by pigs in the same way that Cincinnati had been 40 years prior, as seen in Figure 5. Despite these changes, pigs and their products remained such

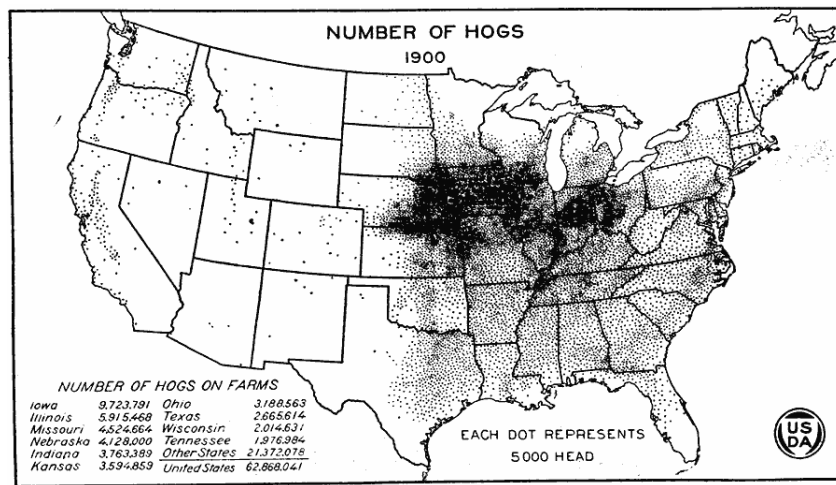


Figure 5, United States Production of Hogs, 1860. United States Department of Agriculture Yearbook 1922 (Washington, DC: Government Printing Office, 1923) 190. Courtesy the private collection of Roy Winkelman.
<https://etc.usf.edu/maps/pages/100/160/160.htm>

an important asset to the city that in 1872 the Pork Packers Association was founded with the goal of increasing collaboration between the different firms and working together to get the best

¹²⁵ Stradling, *Cincinnati*, 54.

prices possible.¹²⁶ Such an association seems to acknowledge the fact that centers of pork production might lie elsewhere, but that such a fact would not stop these businesses from doing what they had done before for decades. Still taking pride in their industry, the Association would present the newest and most efficient pork-processing inventions and the finest cuts of meat at Cincinnati's annual Industry Expositions.¹²⁷ Such pride would ensure that the memory of Porkopolis lived on its citizens for decades to come.

Cincinnati's development into Porkopolis during the mid-nineteenth century was the result of several environmental and societal factors. Being located near canals such as the Miami and Erie and Ohio and Erie, as well as the Ohio River provided the city with access to the raw materials and markets the young pork-packing industry would need to grow. Fertile river valleys provided further transportation and acres of rich farmland capable of rearing thousands of hogs. Trends in farming, relying on corn and hogs, provided Cincinnati with thousands of pounds of meat to pack. Resourceful business owners and pioneering inventors created means of pork and pork byproduct production that transformed the industry. As a result, the city became (in)famous for its pigs and pork-packing. The revenue the industry brought in allowed for the city to expand both in size and in its economy, introducing new industries that carried on after pork-packing fell from its prime. However, such progress comes at a price. For Cincinnati, many of its beautiful waterways were left polluted. Hogs ran the city as much as people did. As time went on the byproduct industry continued to grow, strengthening the city's economy. Eventually, shifts in agriculture brought on by continued westward expansion and railroads, competition from cities like Chicago, and the Civil War, ended the city's pork-packing supremacy. Over a century later,

¹²⁶ King, *King's Pocket-Book*, 40

¹²⁷ The Cincinnati Historical Society Bulletin Vol 28, 1-4 (1970), 181.

many Cincinnatians still hold onto the legacy of Porkopolis. In 1987, pigs became an unofficial symbol of the city when the sculptor Andrew Leicester debuted his addition to the smokestacks guarding the entrance of the Bicentennial Commons: a pair of flying pigs. When asked he said, “[the winged swine] represent the angelic spirits of all the pigs that were slaughtered and were building blocks of Cincinnati’s prosperity. So they’re up there paying one last tribute – singing the ‘Hallelujah Chorus’ – to all their [dead] brethren who flowed into the river.”¹²⁸

The story of Cincinnati’s Porkopolis Era is a story of environmental factors, innovation, environmental degradation, and adaptation. It tells of how seemingly random factors, such as river placement, can redefine a region. It shows people how industry-specific inventions, such as the design of a slaughterhouse or a lard boiler, can reshape an entire city’s economy. Porkopolis also highlights the importance of not throwing away everything in the name of forward progress, as the loss of the region’s creeks show how destructive unchecked industry can be. Finally, the story of Porkopolis shows the necessity for a diversified economy and flexible mindset, as things can change overnight and challenge old ways, destroying those unable or unwilling to adapt. The story of Porkopolis is a mixed bag, as is any story in history, but it is one we should not soon forget. It tells us how economies change and how people change the environment and vice versa. Learning the history of Porkopolis challenges us to look at our world today and to spot similar trends and trials, we might be surprised where such investigations take us.

¹²⁸ “Cincinnati: Quotations Concerning Pigs, Lard and Legacy.”

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