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HOG CHAINS AND MARK TWAINS: A STUDY OF LABOR HISTORY, ARCHAEOLOGY, AND INDUSTRIAL ETHNOGRAPHY OF THE STEAMBOAT ERA OF THE MONONGAHELA VALLEY 1811-1950

Marc Nicholas Henshaw
Michigan Technological University

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HOG CHAINS AND MARK TWAINS: A STUDY OF LABOR HISTORY,
ARCHAEOLOGY, AND INDUSTRIAL ETHNOGRAPHY OF THE STEAMBOAT
ERA OF THE MONONGAHELA VALLEY 1811-1950

By
Marc Nicholas Henshaw

A DISSERTATION
Submitted in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY
In Industrial Heritage and Archeology

MICHIGAN TECHNOLOGICAL UNIVERSITY
2014

This dissertation has been approved in partial fulfillment of the requirements for the
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Abstract

This dissertation examines a unique working class in the United States, the men and women who worked on the steamboats from the Industrial Revolution until the demise of steam-powered boats in the mid-20th century. The steamboat was the beginning of a technological system that was developed in America and used in such great numbers that it made the rapid population of the Trans-Appalachian West possible. The steamboat was forever romanticized by images of the antebellum South or the quick wit of Samuel Clemens and his sentimental book, *Life on the Mississippi*. The imagination swirls with thoughts of boats, bleach white, slowly churning the calm waters of some Spanish moss covered river. The reality of the boats and the experience of those who worked on them has been lost in this nostalgic vision.

This research details the history of the western steamboat in the Monongahela Valley, the birthplace of the commercial steamboat industry. The first part of this dissertation examines the literature of authors in the field of labor history and Industrial Archaeology to place this work into the larger context of published literature. The second builds a framework for understanding the various eras that the steamboat went through both in terms of technological change, but also the change the workers experienced as their identity as a working class was being shaped. The third part details the excavations of two steamboat captains houses, those of Captain James Gormley and Captain Michael A. Cox. Both men represented a time in which the steamboat was in an era of transition. Excavations at their homes yield clues to their class status and how integrated they were in the local community. The fourth part of this study documents the oral histories of

steamboat workers, both men and women, and their experience on the boats and on the river. Their rapidly declining population of those who lived and worked on the boats gives urgency for their lives to be documented. Finally, this study concludes with a synthesis of how worker identity solidified in the face of technological, socio-economic, and ideological change especially during their push for unionization and the introduction of the diesel towboat.

Introduction

The American Industrial Revolution profoundly altered the ability of businesses to procure, produce, and transport finished goods throughout the nation. Starting on the east coast as small industrial centers, industrial adaptations slowly moved westward on the narrow trails and passes through the Appalachian Mountains into the Ohio Valley. Industrialization spread as pioneers and merchants looking to establish centers of trade and opportunity settled the interior of the country. They sought places with streams and rivers to power their mills and ship their goods. The river became the source of transportation and power the “super highway” that etched deep into the North American Continent. As settlers and explorers headed westward over the Appalachian Mountains from the eastern seaboard, the first river drainage they encountered with the potential for navigation was the Monongahela River.

River transportation technology initially progressed slowly. In the 18th century travelers continued to rely on the familiar human-powered vessels such as canoes, bateaus, flatboats, and keelboats. However, in the 19th century, advancements in metal fabrication and steam engine technology dramatically changed the available technology. This change transformed a traveler’s journey on the western rivers from being largely under control of nature to something that could be scheduled and planned for. During the latter half of the 19th century, the lock and dam systems replaced the river’s seasonal tendency of high and low water to pools of a fairly consistent depth, making transportation a year-round business.

This dissertation centers on the steamboat workers, the crews who lived and worked on the river for their living and who spent usually brief periods of time in their home communities. The steamboat was a unique American invention and created a unique work experience unlike other forms of marine transportation. The workers formed a distinctive working class and an identity that separated them from other professions such as coal miners or steel workers. Over the sixty-four years since the last sternwheel towboat plied the Monongahela River, time has taken its toll on those who had the opportunity to live this way of life as a “riverman” or “riverwoman”. Their voices have slowly been muffled by time and only add to the urgency that their experiences be studied. In this study I had three overarching questions. The first question was: what can documentary evidence, archaeological excavations, and oral histories reveal about identity formation of steamboat workers? Two, how did technological changes shape worker identity? And three, how did ideology and socio-economics play a role in the formation of worker identity?

The introduction of the river steamboat to the Trans-Appalachian West in 1811 forever changed navigation, transportation, and labor on interior rivers. Later, canals, such as the Erie Canal (1817), Pennsylvania Canal (1826), and the Chesapeake and Ohio Canal (1831) injected commerce onto the Monongahela, Allegheny, and Ohio river systems and bolstered the steamboat industry with additional freight. With the steamboat also came a new class of workers, the steamboat worker, who was often from one of the many small towns that lined the rivers. These men (and later women) were a diverse group of individuals from varying class statuses and ethnic/cultural backgrounds. Their lifestyles were migratory and their skills learned in an apprentice-like fashion from the

older more seasoned crew members (Bissel 1952; Hunter 1993; Twain 2001) always moving to where the work was plentiful.

In the early years of this new enterprise, little or no regulation governed daily work hours or worker safety. Harsh weather conditions, including snow, ice, and rain, made working conditions on the rivers just as dangerous as life on the high seas. Added to this level of danger was the unpredictability of the newly introduced steam engine. Captains attempting to race other steamboats or decrease their time between landings could raise the pressure in the boilers to catastrophic failure levels, placing the lives of the crews and passengers at risk in the name of status or monetary gains.

The labor/management hierarchy on the boats consisted of captains, mates, engineers, and deckhands who were collectively tasked with the responsibility of the boat's daily operation. Those who worked on the deck were responsible for cargo, passengers, and later barges of coal and other materials being shipped. The deckhands on the steamboats were exposed to the harsh elements of the weather as they took their turns on "watch". Although their employment status was semi-skilled, they possessed power to grind work to a halt during strikes on the river.

I combine three different methods of inquiry to understand the process that steamboat workers developed their own identity as a class of workers. This pattern of identity formation is traced through documentary research, archaeological excavation, and industrial ethnography. Combined, these sources allow one to create a contextually "rich" framework for examining the life of the steamboat workers.

This framework is built around three periods I've identified in steamboat history specific to the Monongahela Valley. Each period has a well-defined theme that

contributed to its particular definition. The first is the Early Steamboat Era (1811-1865), which was based around the development of the steamboat. The Middle Steamboat Era (1866 to 1918) focused on the development of coal interests in southwestern Pennsylvania. The last period, the Late Steamboat Era (1919 to 1950) had a worker centric focus as labor disputes and the transition to diesel power took hold.

This dissertation examines the evolution of worker identity during each of the steamboat eras. Each era represented a developmental period whether it was the formation of worker identity in the Early Steamboat Era, the transformation of worker identity in the Middle Steamboat Era, or the spark of class consciousness in the Late Steamboat Era.

The creation of identity among these workers was a dynamic process changed over time. Isolation for weeks or months on long trips, close working relationships of deck crews and other non-officers, and a division of labor along gender lines and racial divides all contributed to identity formation. The structure of the steamboat business and its transformation from a separate industry to consolidation under a corporate structure also shaped the identity of this class of workers. This consolidation allowed for greater communication between workers and a singular entity, the corporation to fight against.

I focus this research on the Monongahela River Valley in Southwestern Pennsylvania. The Monongahela River, a 128 mile long, northward flowing tributary of the Ohio River, begins its journey at the confluence of the Tygart and West Fork Rivers in Fairmont, West Virginia. The focus of this study's archaeological investigations is in Brownsville, a small town located roughly sixty-six miles south of Pittsburgh on the Monongahela River, and the birthplace of the commercial steamboat industry. The oral

histories collected and composed into the industrial ethnography section, were taken from men and women who lived and worked from the small towns located within the Monongahela Valley and in some cases, along its tributaries.

Methodology

This dissertation combines three data sets to explore the process of identity formation of steamboat workers. The first data set was that which could be obtained from documentary research. I used census records from the 19th century, newspaper articles, government reports, maps, diaries, and books to reconstruct the life aboard a steamboat. Using documentary research to recreate the life of a steamboat worker during these time periods present problems. Relatively little remaining documentary evidence exists in the form of business records, newspaper articles, journals, or oral historical accounts specific to the Monongahela Valley. While the names and the recorded histories of prime movers in the steamboat industry, such as Roosevelt and French, are detailed, the early crews are only partially visible within the documentary record.

My second data set was acquired through archaeological excavations at two homes of steamboat captains in Brownsville, Pennsylvania. Each captain represents a different era (Early and Middle) and their lives reflect the different choices they made based on class and social status. They also reflect the changing history of the steamboat industry, from its origin based on a frontier economy to early industrial capitalism and, finally to one that changed into an industry swallowed by corporations. The material culture recovered from the two house sites provides evidence of their class status within a community, as do other indicators such as the personal networks that each captain

created, i.e. their social sphere of interactions. For insight, I use a relational model of class (Wurst, 2006) and apply it to the lives of Captain James Gormley and Captain Michael Cox. Captain Gormley lived during the period of a waning frontier economy where class was based less on monetary capital and more on social capital. For Captain Michael Cox, monetary capital played a larger role in his class status, but I argue that his integration within the Brownsville community also played an important role in his status.

My third data set is a compilation of oral histories I collected between 2010 and 2011 of men and women who worked on the steamboats from the 1930s to the 1950s. These oral histories are important because work on the steamboats had changed little since the towboat replaced the packet boat after the introduction of the first half of the 19th century. Their working experience reflects the living and working conditions on the boats in the late 19th century due in part to the nature of their training. The various positions on the steamboat were occupied by persons who learned their trade through apprenticing with older members of the crew. This knowledge was passed on from generation to generation of steamboat workers connecting the individuals in my oral histories to the long list of workers predating them. The only exception to this model is the role of the ship's cook, which became a female centered position on the boats in the 20th century but had been a male oriented role in the 19th century.

Chapter Descriptions

I begin with a literature review of labor history and the connection between labor history and historical archaeology. The two fields were once separated by different paradigms and lines of inquiry, but as historical archaeology made inroads into places of work, labor history was used as a lens of interpreting worker and capital also relationships. A new type of labor history emerged as scholars such as E.P. Thompson (1966) and Herbert Gutman (1977) examined the daily experiences of the individual worker, and did not focus only on broad sweeping collectiveness of unionization that previous historians focused on. Anthony Wallace (1987), an anthropologist, studied how the culture and structure of the work place with its regulations and hierarchies contributed to the creation of class identity among coal miners in eastern Pennsylvania.

Likewise historical archaeologists and later industrial archaeologists were forced to look beyond the material culture and classifications systems of their trades to understand class as something that included life outside of the workplace. They began to focus on the individual as the prime mover in the capitalist mode of production and examined not only their relationship to management, but also their roles within the larger community where they resided. The literature review provides the framework that places this dissertation not only in the field of labor history but also into the fields of historical archaeology and industrial archaeology.

In Chapter 2, I first describe the role that the frontier economy played in southwestern Pennsylvania and how this was reflected in the development of river transportation. The research question I ask in Chapter 2 is: how did conditions during the

Early Steamboat Era contribute to the development of the steamboat worker's identity during the 19th century?

The Early Era revolved around the technological development of river transportation and the opening of the frontier west of the Mississippi River for commerce. The introduction of the steamboat the *New Orleans* (1811) proved that steam power was a practical application to river travel, if only in a downstream direction. However, it was the success of the *Enterprise* (1815) and the ability to travel against the current of rivers that led the way for steam power to be used in commerce. During this same time period, the Monongahela River itself was undergoing a technological transformation. Locks and dams were constructed to allow for year round river transportation, not just during the seasonal high water periods. The locks and dams were integral in the development of the steamboat, as deeper pools led to the increased tonnage-size of the boats. The people who worked on these early boats were laying the foundation of a new working class, the steamboat worker

Chapter 3 details the Middle Steamboat Era and the growing focus of coal and coal production. Throughout the Monongahela Valley independent coal mines were created and consolidated under the banners of large corporations. These trapped mines as they came to be known were often the site of worker unrest and worker organization movements. The coal industry as a whole directly affected the technology and form of the steamboat industry into the late 19th and early 20th centuries. With the value of coal skyrocketing after the Civil War, the ability to transport it along river routes became increasingly important especially to areas the railroad had not yet penetrated. Steel industries flourished along the rivers, with cities such as Pittsburgh Pennsylvania,

Weirton West Virginia, Youngstown Ohio, and Ashland Kentucky. The towing of coal would slowly overtake the passenger and packet industries in the valley as the need for coal rose in demand.

This chapter also examines the lives of two steamboat captains living in Brownsville during the middle to late 19th century. While I am primarily interested in the everyday worker, the transitory nature of work on the river for the average deckhand left finding a suitable site difficult. Captains, who often rose through the ranks on the boats, they lived in permanent houses, and represented a bellwether to the transitions of the steamboat industry. Archaeological excavations at their homes addressed the following questions: what do the archaeological excavations of two steamboat captain's houses reveal about their class status? To what extent do their artifacts assemblages reveal the transition in the steamboat industry from an early industry based in a frontier economy to a corporate structure based on industrial capitalism?

The excavation at the Captain James Gormley house on Bank Street in Brownsville revealed the everyday life of a steamboat captain who worked on the river in the 1850s and 1860s. His artifacts allude to a period when the steamboat industry was patterned after early corporate structures of "buy-ins" and local capital investment, still influenced by a waning frontier economy. Many steamboat captains such as James Gormley shared a financial interest in the boats they piloted with other capitalists who were mainly merchants. These were largely temporary partnerships created and dissolved rapidly as most steamboats only lasted five years or less. If the boat was not profitable, the partnerships could dissolve sooner, liquidating their assets in the venture.

Gormley lived during a time when class and social status was tied to social capital and negotiated within one's network of personal connections. Monetary capital, while still important, was in short supply. Non-tangible capital such as personal integrity, family pedigree, and the social networks a person married into, all influenced class standing within a community.

The residency of Michael A. Cox house on Church Street was chosen for excavation because it could provide information on how class was transformed during the period of the 1870s when the steamboat industry was firmly in the grip of corporate capitalism brought on by the rise of coal production in the Monongahela Valley. Large corporations like US Steel, Crucible Steel, and others bought out local interests in the steamboat industry and consolidated the boats under corporate control like coal mines in the area. Michael Cox still owned his own boats during the period however he diversified his interests. He was also on the board of directors of a local bank which allowed him to integrate into Brownsville's social culture.

Chapter 4 and 5 examine the last period, the Late Steamboat Era. This era was characterized by labor unrest. With the consolidation of the coal mines came the consolidation of towboat companies on the river. Miners in the 1890s began to feel the pressure of long workdays, unsafe working conditions, and a lack of rights. When the coal miners went out on strike, the towboats stopped operations. However, it was not until late in this period that the steamboat workers began to take notice of their own labor conditions and began to wildcat strike. After World War II the introduction of the diesel towboat spelled the eventual end of the steamboat era in the 1950s.

In this chapter, I add the final data set, the industrial ethnography component to the research study. This chapter addresses the research questions: what insight can oral histories of steamboat workers from the 1930s and 1940s give into the identity of this working class in the 19th century? What can these oral histories tell about life and work on the river of the 19th century?

Oral histories collected in 2010 and 2011 gave direct insight into the class identity of steamboat worker at the very end of the steamboat era. However, technology and the routine of their work had changed little compared with their 19th century counterparts. In general, these men and women had generations of river workers in their families and a strong connection to that past. Many lived in communities along the Monongahela River comprised predominantly of steamboat workers, such as the small town that grew around Lock #4. The oral histories that I collected represent a cross-section of work life on the steamboats. Captains, deckhands, and cooks represent a hierarchical tier of power relations on the boats and reveal the under lying struggle of class in their shared hardships and day-to-day hazards of working on the river. The relationships formed between the female cooks and their male co-workers give insight into an industry that integrated women into its workforce early in the 20th century.

Chapter 6 integrates the analysis of these three data sets to create a model of how the formation of identity for this class of workers began in the earliest era and proceeded until the end of the steamboat era in the Monongahela Valley. This chapter revisits the concept of class initially laid out in Chapter 1 using the relational model as a foundation for class analysis. This section addresses each of the research questions and forms a detailed analysis of the findings from the documentary, archaeological, and oral history

data sets. The combination of these data sets provides a picture of the life of the average steamboat worker, their relationship to the power structure on the boats, and their relational class standing in the community.

Chapter 1. A View from the Pilothouse: Labor History and the Archaeology of the Working Class

The steamboat industry, from its inception in 1811 until its demise in 1950s, was a complex network of organizations that was transformed over time as economic and cultural changes occurred during its 140 year history. The workers on the steamboats went through a transformative process during this long period of river transportation. This dissertation is about documenting these changes in the workers through historical documents, archaeological excavations, and oral histories. To better understand the nature of these changes and their role in shaping class identity of steamboat workers in the Monongahela Valley, it is important to situate them in reference to the larger body of labor historical research. Just as the steamboat workers changed over time, so has the lens used to view them.

This literature review details the history that labor historians and historical archaeologists have shared. While the two disciplines were largely unrelated, the field of industrial archaeology has opened the door to a combination of theoretical backgrounds in discussing and evaluating labor. Historical archaeologists, like Paul Shackel and LouAnn Wurst draw heavily from the field of labor history.

Labor history and historical archaeology faced the same growing pains in the mid-1960s as both historians and archaeologists began to question the established paradigms of their field (Braverman 1998; Gutman 1977; Hindle and Lubar 1988; Mintz 1985; Trigger 1990). Labor history shifted away from a focus on large social organizations, such as unions, labor unrest, and national movements. The shift in historical archaeology

started with a divergence away from processual based archaeology that believed in homeostatic theories of cultures and environmental determinism. Both of these fields refocused their efforts on a bottom up approach that focused on people, workers, and their daily lives as opposed to large scale mechanisms of social change where the individual was lost in the statistical interpretation of data.

New Labor History

The tenets of the old labor history were challenged in the 1960s at a time when social unrest, due to the Vietnam War, rising labor tensions, and the Civil Rights movement were at their peak in American culture. Feminism, de-industrialization, and automation in the workplace all contributed to a re-examination of labor history. From this period came three pivotal works by E.P. Thompson (1966), Herbert Gutman (1977), and Harry Braverman (1998). These works laid the foundation for the new labor history and shifted the focus from institutional frameworks to everyday worker experiences. The top-down approach of the old labor history was reversed. New studies were no longer confined to factory; they were broadened to include the individual worker and addressed issues of working class formation and class-consciousness. The realization arose that class formation was not just tied to the workplace but also to contexts that included homes, neighborhoods, churches, fraternal orders, and the local saloon. The new labor history was concerned with the industrial community over the corporation alone.

E. P. Thompson opened the door for the new labor history. Although his work focused on the British Industrial Revolution, it laid the framework for future researchers in the field of labor history. Thompson's *The Making of the English Working Class*,

focused on the textile mills in Manchester, England. The work was primarily an ethnohistorical account of the transformation of a majority of piece workers into industrial wage earners. Thompson was the first to deconstruct the process by which an agrarian population ever so slowly bent to the industrial lifestyle. His work begins in an unorthodox place for the old labor historians; the home of the worker. He details the replacement of mercantilism wherein the skilled artisan and his family wove clothing, to the capitalist regime where the artisan was deskilled and his pace set for him creating the capitalist mode of production and transforming the artisan into a laborer.

Thompson brought together cultural aspects of labor history not common in prior works. Personal accounts, diaries, ethnicity, and gender were all used by Thompson to recreate the conditions that lead to working class development in the Manchester textile mills. Gender was central to Thompson, as the early working classes in the textile mills were women and young girls. Often these mills employed the whole family unit, and stratified labor accordingly (Thompson 1966). In Thompson's own admission, he seeks "to rescue the poor stockinger, the Luddite, cropper, the 'obsolete' hand-loom weaver...from the condescension of posterity" (Thompson 1966). Thompson however knows his work is different from all that had come before it. He states,

"I have been conscious at times of writing against the weight of the prevailing orthodoxy. There is the Fabian orthodoxy where workers are seen as passive victims of the *laissez faire*. There is the orthodoxy of the economic historians in which the labor force is seen as migrants, or data for their statistical series" (Thompson 1966).

The *Making of the English Working Class* brought agency to the workers and gave them control over their own history by illuminating their choices in their daily lives with class conflict, unionization, and community organization (Thompson 1966). His work, along with Gutman and Braverman, opened the eyes of labor historians by placing people at the center of the history of labor. These works were to become the framework for the new labor history.

After Thompson's pivotal work, Herbert Gutman's *Work, Culture and Society in Industrializing America* shifted the focus to the New World and its industrial revolution. This compilation of essays represents research into the beliefs and behavior of the American working class as they were transformed into an industrial capitalist society (Gutman 1977). His main question was, "How did craftsmen, peasants, and versatile laborers become a society of modern industrial workers?" (Gutman 1977). Gutman brought to the table a cultural view of work not seen in studies prior to his.

Gutman's arguments for the late formation of the working class in the early period of industrialization in the U.S. rest on the piecework system and the temporary employment of farmers' daughters in textile mills. This mirrors the form of industrialization that was taking place in Britain with the weavers of Manchester. Both Gutman and Thompson agree that the ability to change jobs and heavy turnover rates in the mills kept working class cohesion to a minimum. It took the introduction of machines, the replacement of the piecemeal system of employment with hourly wages, and institutionalization of the industrial day to start the beginnings of working class formation (Gutman 1977; Thompson 1966).

The institutionalizing of the industrial day for workers made the transition difficult for many immigrant workers coming into the country. Their system of cultural holidays and observances became a point of conflict with their capitalist overseers (Gutman 1977). No longer able to observe holidays and breaks, the workers limited their production output in an attempt to control the means of production. The same could be said of the Manchester weavers who, until the introduction of machine looms, controlled their output through limiting their production (Thompson 1966). The common thread in this early period was that most of these laborers were skilled workers whose crafts had not yet been replaced by mechanization.

Gutman's essays cover a broad range of topics within the formation of the working class, but more importantly, with the analysis of industrial communities. Gutman examines Patterson, New Jersey as a case study of the "Industrial City". This work examines the role of paternalism in the capitalist system and its hold over labor. He examines the class status of the industrial elite and concludes that class and its ranking are promoted from within. In other words, most people born into a specific class retain their position in that class. "The archetypical industrial leader was American by birth, of a New England father, a Protestant by religion, and distinctly upper class in origin" (Gutman 1977). Gutman's deconstruction of the inner workings of the industrial community at Patterson went so far as examining the management of machine shops and ethnic diversity among workers.

The final of the authors that represent the new labor history rests with Harry Braverman and his book, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. Braverman harkens back to the old labor historians and their

examination of the processes on the shop floor. However, Braverman is concerned with the social processes that occurred in the workplace from an evolutionary Marxist theoretical perspective. His concern is with the degradation of work as it affected the working class not the entire society. His primary thesis in examining this degradation was then to demonstrate how the structure of the working class changed and the extent to which it changed. Braverman focuses on the shop floor and the social realities/constructions that shaped it. One of the major forces on the shop floor which contributed to a marked deskilling of labor and further separation between the worker and the means of production was the introduction of scientific management by Frederick Winslow Taylor (Braverman 1998).

Taylor's management accomplished this deskilling in three ways. The first was the disassociation of the labor process from the skills of the worker. The second was the separation of the worker from the complete process of production. In Braverman's words, the worker was separated from product conceptualization, and from the actual execution of the way in which the product was produced. Thirdly, was the use of monopoly over knowledge to control each step of the labor process and its modes of implementation. Monopoly was formed by the multi-tiered levels of managerial control over labor and production brought about by the introduction of Taylor and scientific management (Braverman 1998).

By the systematic timing of every move workers made through the course of accomplishing their tasks, Taylor was able to deskill the workforce and further separate the worker from the means of production (Braverman 1998). As the tasks became simpler and more repetitive, the worker needed less skill and time to accomplish a given job.

The new labor history, diverting from mass movements and organizations, to a worker centric analysis allowed for the discussion of class formation and, in particular, the concept of class-consciousness. Although Marx had elaborated on class formation and working class consciousness, these formations were only observable under the old labor history as signs of conflict and the dialectical principles of capitalists vs. workers and bourgeoisie vs. proletariat. With the works of Thompson, Gutman, and Braverman, class identity and formation can be observed through the agency of the workers and their families. Class formation and development were political as well as cultural, and figured heavily with the economic environment in which they were situated (Willentz 1989).

Thompson defines class as historical relationships that are bound by seemingly different and unconnected events both in experience and in the consciousness (Thompson 1966). He defines this as class-consciousness, which is embodied in traditions, norms, values, ideas, and institutional forms. Gutman largely ignores formally defining class, and instead relies on the works of Mintz (1974) and the definition of class that is tied to the traditional definition of culture. “Culture brings about arrangements of persons in societal groups for whom cultural forms conform, reinforce, maintain, change, or deny particular arrangements of status, power, and identity” (Gutman 1977). Braverman, however, defines class-consciousness more succinctly. He states that class-consciousness is a state of social cohesion reflected in the understanding and activities of a class or a portion of a class. This expression within the class is both durable and persuasive toward its position in society. Class-consciousness has a slowly changing organization of traditions, experiences, and education on the long term, while on the short term there may be a complex dynamic of moods that change with the circumstances (Braverman 1998).

These changes can occur from day to day and can spark conflict and stress between the classes. An example of this is the American steelworker where long hours, low wages, bleak working conditions, and anti-unionism created an environment where class-consciousness became a collective development (Brody 1993).

Since the introduction of the new labor history, the field has move away from its economic, union-focused discourse, and allowed other scholars from the social sciences to enter its ranks. Anthropologists, sociologists, and social historians have contributed widely to the field of labor history each from their own theoretical and academic backgrounds. Many of these authors have forgone the studies in the overall process of class creation across the entire period of industrialization, and have instead focused their lens on specific industries, cultures, and time periods to answer specific questions on working class structure and conflict. This section will detail some of the works by various authors on working class formation throughout the world.

Anthropologists and sociologists examined the formation of the working class on a regional basis used specific industries as their unit of analysis. They did not ignore the global ties of industry; instead they focused on the ethnic diversity of the working class and the connections that were made between countries. These industry specific studies include Anthony Wallace's *Rockdale* and *St. Clair*.

In *Rockdale*, weavers were subjected to ever increasing mechanization and modernization in the workforce. While the book examined technology to a great degree, *Rockdale* represented an area where an agrarian culture was slowly transformed into an industrial one. The textile mill was comprised of separate areas for different tasks that created a division of labor within the workforce. Mechanization de-skilled the loom

operators and reduced wages. Working class-consciousness was born in the protestant work ethic of the early 19th century where the workers shared experience and hardship led to conflict and organization in the mills (Gutman 1977; Thompson 1966; Wallace 1978). Strikes and damage to company machines were the most cited forms of resistance.

This is different from working class development in *St. Clair*, another of Wallace's (1987) treatises on early industrialization. In *St. Clair*, coal miners in the anthracite region of eastern Pennsylvania experienced working class formation in a different process. The miners at the start of the 19th century were skilled laborers who worked under a contract system and employed their own helpers in the breast of the mine (Wallace 1987). These helpers were usually the miner's sons or relatives who were learning a skill based on a hereditary craft/trade system. The miner was largely responsible for himself in the mine and could come and go as he pleased (Wallace 1987). However with the introduction of long wall mining, the miner was forced to work as a group with other miners along a coalface for a set number of hours. This limited the freedom of the miner to come and go and work in his own area (Wallace 1987). The introduction of the steam engine allowed mines to extend deeper into the earth than ever before. This increase in depth caused more miners to be exposed to firedamp and thus more fatal explosions. Safety regulations such as the installation of fireproof doors and the hiring of firemen (foremen in charge of safety below ground) further controlled the actions of the miner. Working class formation in the miners of St. Clair was based on the increased number of regulations and forced work habits.

Wallace also takes into account the women and children in the workers family. Often women, children, and the disabled were used as laborers in the collieries for the

sorting of coal grades. Children in particular were used in this role until they were old enough to enter the mines and work alongside their fathers. The women's role often changed between housewife and servant. Many women took on jobs cooking and cleaning for miners who were working shifts and did not have time to cook and clean for themselves. This brought in added revenue to the family to help in support during periods the mine was closed due to disaster or mechanical problems.

Race and gender was often ignored under the old labor history as the field of study only acknowledged the working classes as nameless faceless masses moved by capitalists needs. Sean Wilentz addresses race in the *Rise of the Working Class, 1776-1877*, and differentiates the white North from the black South in terms of the labor force. Racial diversity, mainly from the importation of slaves, further divided the South into white plantation owners and their black labor (Willentz 1989). Arnesen (1998) calls for not only the study of African Americans in the workplace but also of domestic workers, washerwomen, female shipyard workers, migrant laborers, and convict laborers as new directions into working class studies (Arnesen 1998). However, the study of race has led to a rethinking of previous industries often associated with white laborers. Herbert Hill approaches race in the history of labor as a fundamental issue of working class identity (Hill 1996). The role of race in the new labor history is to identify opposition and resistance within African American communities such as in the work by Brian Kelly, *Race, Class, and Power in the Alabama Coalfields, 1908-21* (Arnesen 1998; Kelly 2001). Non-white laborers were considered lazy, non-competitive, and therefore did not need unions for their protection. Unions were only for Caucasians (Hill 1996).

This dissertation draws heavily from the new labor historians and anthropologists in its research design and goals. I use the bottom up approach to studying the labor history of the steamboat industry in the Monongahela Valley by using the worker's own accounts to understand the development of their identities as workers and to explore the historical process that followed them throughout their identity creation until the last steamboat plied the river in the 1950s. This approach shadows Thompson and Gutman by using the worker to explain his or her identity as a laborer in their everyday lives. Following the tradition of the new labor history, I use not only the accounts of the crew's life on the river, but I explore their social activities at home and within their communities; the workscape.

This work would fit equally well with Wallace and his work at St. Clair. The steamboat crews and the coal miners, although drastically different professions, went through a transformative process of identity formation as disasters and regulations changed their way of working. Both forms of labor had paternalistic oversight, one in a mine, the other on the boats, both fought for better wages and benefits, and both struggled to unionize. However, what separates this study from the others is the archaeological component.

Archaeology of Labor

No other human activity has changed the landscape, created social classes, organized labor, and transformed the relationship between capitalist and worker than the process of industrialization (Shackel and Palus 2006). Like labor historians, there are differing camps in the field of archaeology dealing with the study of industrial sites and

their complex integrations into their surrounding communities. While their approaches may differ, Historical Archaeology and Industrial Archeology have begun to examine sites from the position of the workers, their struggles, and their roles within the larger framework of industrial capitalism.

Paul Shackel (2009) in his work titled “The Archaeology of American Labor and Working Class Life”, draws attention to the often disconnect between industrial archaeology and labor history in the United States. The factory or work place is often the singular focus while the workers themselves have become simply a part of the process of site formation (Shackel 2009). For many sites, poor preservation of the documentation of workers means that who they were, the positions they held, or the pay they received is simply unknowable. Moreover, due to the general fluidity of early capitalism and transitory nature of labor for most of the latter half of the 18th-century until the early 20th century, all that is left behind are the scant remains of past industrial labor. Slag piles, canal ditches, foundations, and empty structures are the hallmarks of industrial sites across the nation; however, it is on the faceless and nameless worker whose human agency is mirrored in the site formation process that the industrial archaeologist must focus.

The site specific nature of industrial archaeology has left interpretation of sites based primarily on industrial landscapes, historical significance, or technological attributes, while leaving workers, labor struggles, and social context within a broader interpretation of industrial capitalism to the wayside (Palmer and Neaverson 1998; Shackel 2009). Industrial archaeology at its very beginning was atheoretical while focusing on technology over social implications (Palmer and Neaverson 1998). In *The*

Texture of Industry (1994), Robert Gordon and Patrick Malone cover a wide range of industrial sites across North America. Their broad study follows an atheoretical approach based heavily on the site specific nature of industrial archaeology. Themes such as fuel, transportation networks, machinery, and building design overshadow those who worked on the shop floors, or how these sites fit into a larger context of the spread of industrial capitalism, race, or gender.

Eleanor Casella (2005) called for the field of industrial archaeology to move beyond the site specific descriptiveness and push further into the realm of complex multi-tiered, multi-scalar networks of production, consumption, and exchange. It is at this very intersection where the broader themes of anthropology and historical archaeology fill in the void of larger cultural theory to place industrial archaeology into a larger global perspective.

Like the old labor historians, those pursuing a historical approach to the predominantly prehistoric field of American Archaeology found themselves at a crisis of theoretical perspectives. Unlike the New Archaeology with its processual middle-range theories with goals of decoding cultural laws using complex theories based in the schools of Julian Steward and Leslie White, historical archaeologists found themselves in an atheoretical field. While prehistoric archaeologists attempted to look for broad patterns of cultural change, with individuals as shadowy unknowns, historical archaeologists found themselves face-to-face with subjects through supportive documentary evidence. The shift from the science based processual historic archaeology to one focused on context and material culture became the predominant call in mid-1980 (Delle, et al. 2000). The shifting of paradigms to include issues of race, class, and gender and the

inequalities that arise from these power relations became the focus for many historical archaeologists. The role of individual agency within broader structures of power relations became the center focus. This refocusing was well suited for the interpretation of industrial sites not only on a local level, but on a global level as well.

Charles Orser (1996) called for a historical archaeology that “digs locally yet thinks globally”. Orser frames his archaeological studies into a mutualistic perspective. Mutualism maintains that “men and women create and maintain numerous social relationships...depending upon the setting and circumstance.” (Orser 1996). Orser identified three implications of a mutualistic perspective. The first is the use of technology, not necessarily the technology itself. By examining the social relationships forged around the use of a particular technology instead of focusing on the technology itself, then narratives can be constructed around the social implications for its use. The second use for a mutualistic perspective is the ability to examine multiple scales of interpretation both on a macro and micro level of networks within a study area, much like core-periphery relationships. The third use for a mutualistic perspective Orser (1996) details is based on methodology. He points out that a historical archaeological site is not merely a collection of glass, ceramics, and nails but is connected to a broader network that is globally connected.

Michael Nassaney and Marjorie Able (2000) explore the avenues which elites organized labor spatially in order to reinforce traditional 19th century power relations at the Russell Cutlery in Massachusetts. Their work not only uncovered how labor was organized based on the panoptic vision of the managerial class, but how the workers resisted the manufacturing process by throwing away usable products such as knives

(Nassaney and Abel 2000). This defiance in the archaeological record was more than just a resistance to a manager, but the resistance to the tenants of early industrialization and capital. Workers unable to organize against their managers, had little recourse except to slow production, steal, vandalize, or work on their own projects on factory time (Shackel 2009).

Class

Embedded in the capitalist world, class is a concept that is often difficult to define and even harder to categorize and identify in the archaeological record. LouAnn Wurst (2006) highlights the problems with the concept of class as defined by historical archaeologists. The overuse of the term class and the lack of a common definition, has caused much of this confusion (Wurst 2006). In order to understand class, we must first define capitalism, the mechanism of class creation in the modern world. Mark Leone (1999:4) defines capitalism as a set of social relations where people sell their labor to earn a living. The resources of this system such as raw materials, currency, land, and property are owned privately. Class rises from the differences between wages and profit, ownership, and power relations (Leone and Potter 1999). Capitalism can also be defined as the process through which laborers sell their labor power as a commodity, and capitalists use the profit of those commodities to build surplus and redistribution networks (Delle, et al. 2000).

Class, then, becomes the result of these inequalities in the capitalist system. Historical archaeologists have traditionally based the class of an individual on the artifacts found in his or her possession. Class status became a quantifiable variable, a revelation if the artifacts were of “high quality” or “low quality” as a determination of an

individual's economic status. Basing class analysis purely on material culture ignores the ephemeral social capital an individual may possess, in favor of economic capital. For instance, an individual may work a low wage job yet possess fine ceramics due to bartering connections within the community. This networking has no connected wage earnings and would not be revealed in the archaeological record. How then does archaeology account for social capital that translates into class capital and finally into economic capital by indirect means?

While no single approach to class analysis can take into account every network that a person participates, a relational class model was proposed by labor historian Margaret R. Somers (1996) and historical archaeologists Wurst and McGuire (2002). They emphasize a different approach to the study of class not solely based on the material a person or people possess, but on the social interactions and networks that people belong. Class, according to Wurst, exists only in concrete historical contexts. Historical archaeologists assign class in much the same way as race and gender, through the lens of human agency and identity. Identity at its very core is shaped by the interactions and networks through which a person belongs and the relationships that they form throughout their lives (McGuire 2008).

Class must then be studied as a social totality existing beyond race, gender, and consumerism (Wurst 2006). Totality in a relational based model of class includes everything in everyday life and all social interactions a person can perform. While this type of study is almost impossible to comprehend, I feel that by examining the social networks in which people participate can lead to a better understanding of class outside of the normal approach of agency and wealth tied to monetary gains but rather the social

cores and social peripheries in which a person operated. By placing an individual into their social network it is possible to discern class during a period of time when industrialization was taking hold, especially in southwestern Pennsylvania.

The perspective of a relational class model for understanding not only monetary capital, but social capital within a variety of networks is important when trying to understand how class works in a frontier economy that is later transformed into an industrial capital economy. The two steamboat captains whose houses were excavated, represent two different economies. Captain James Gormley lived during a period heavily influenced by the frontier economy. While he may not have amassed great amounts of money, his social position within the community gave him the ability to negotiate with social capital and bartering. To the social networks he belong to, he was upper class, yet his net worth places him in the middle class during the 1850s. Captain Michael Cox on the other hand, created wealth by investing in industrial capitalist pursuits, he moved between many social networks in the town including fraternal orders. When examining his artifact assemblage was influenced by the upper class networks Cox maneuvered in.

It is clear that the study of labor history through the lens of a historian or the trowel of an industrial archaeologist, has been transformed through the use of broader cultural theory. Labor historians abandoned the top down approach to the study of labor and focused their efforts examining worker relationships from the shop floor. The worker and their experiences whether at work or at home became the real indicator of class consciousness and labor organization.

For the industrial archaeologists, labor was examined through multi-scalar approaches couched within the framework of global capitalism. However, the ability of

industrial archaeologists to study material culture provides valuable insight into worker identity. This dissertation is a combination of labor history methods, anthropological oral interviews, and industrial archaeological techniques examining a community of workers and their evolving identity that has largely been ignored, the steamboat workers.

Chapter 2. Early Steamboat Era (1811-1865) A Rivertown at the Edge of the Frontier.

I have divided the development of the steamboat industry in southwestern Pennsylvania into three eras, each of which has a predominate theme that emerges from this research in the Monongahela Valley. The first is the Early Steamboat Era 1811-1865, which covers the invention and application of the steamboat to the inland rivers of the United States. The emerging theme for this time period is development of a technological system that made the western steamboat a unique American invention. This period is marked by a transition in technology from the packet steamboats to the towboats as the coal industry consolidates in the Monongahela Valley.

Frontier Economy in Western Pennsylvania.

The Early Steamboat Era in the Monongahela Valley was deeply rooted in the economic environment of the frontier economy. The invention of the steamboat and its success was based on a river trade network where goods were exchanged with limited money, and instead, were bartered for or purchased through an exchange of services based on social capital and class status (Buck 1936; Lewis 2009; Mann 1984). The frontier economy was gradually replaced by a more impersonal system of capitalism as the Trans-Appalachian west came to be integrated into the industrial fabric of the expanding nation.

I use the framework constructed by Kenneth Lewis (2001) as a basis for this chapter on the Frontier Economy. As his model of the frontier economy provided insight

into how worker identity and class manifested itself in the steamboat crews on the Monongahela River during the first half of the 19th century. Based on the documentary research and the interpretation of archaeological excavations portions of the frontier exchange economy survived well after the frontier moved westward, especially for those precious few who commanded the steamboats on the Monongahela River.

Historians, archaeologists, and sociologists who have studied the frontier economy of the Trans-Appalachian west place it between the agrarian/mercantilism of the colonial period and the rise of industrial capitalism after the Civil War (Buck 1936; Burkhart 1952; Lewis 2009; Mann 1984; Nobles 1990; Usner 1987). In order to understand the process of industrialization and the development of the steamboat industry in the Upper Monongahela Valley, it is important to examine the underlying mechanisms of the transition from an agrarian economy to a commercial capitalist economy (Lewis 2009). This process was not a homogenous transformation in western Pennsylvania, but happened where entrepreneurs created the conditions necessary for industrial activity to prosper. These core industrial centers then spread out into the periphery of the frontier to harness natural resources and labor.

Early studies of the frontier and the frontier economy appeared soon after the 1890 census. The census enumeration of people, industry, and native groups provided the data that showed that the American Frontier had diminished to the point of no longer being of any statistical importance. This led Frederick Jackson Turner to publish his 1893 synthesis entitled *The Significance of the Frontier in American History*. “Up to and including 1880, the country had a frontier of settlement, but at present the unsettled area has been so broken...that there can hardly be said to be a frontier line” (Turner 1920p.1).

The closure of the frontier prompted Turner to explore the social cultural significance that the frontier represented to the American people. Individualism, liberty, and environmental determinism were the driving forces in the creation of the United States as a nation and as a culture according to Turner (Mikesell 1960). The frontier was a concept imbued with nationalism and racism, a place where “whites” collided with “savages” and where American conquest and Manifest Destiny was the goal (Limerick 1990). His premise became known as the *Frontier Thesis* (Limerick 1990; Mikesell 1960). The frontier to Turner was a uniform transformation based on an evolutionary steady state model (Lang, et al. 1995; Limerick 1990).

Historians rejected much of Turner’s *Frontier Thesis* due in large part to the disregard of gender roles, ethnic diversity, and Native American populations in the development of the frontier. However, Turner’s work laid the foundation for later work on the topic of the frontier by social and environmental historians, labor historians, and historical archaeologists.

New social historians such as Limerick, Burkhardt, Patterson, and Mann moved the field of frontier studies out from the dominion of those who took a top down approach to the study of history and large scale societal movements. Instead, they examined the frontier experience from the lives of everyday men and women. They rejected the term “frontier” as an ethnocentric work imbued with racism and nationalism (Limerick 1990). The concept of the frontier to the social historian became a process of interaction between peoples, natives, and immigrants (Limerick 2001; Mann 1984). The frontier became a nexus of world systems, globalization, industrialization, capitalism, colonization, and exploitation under the new social history. The redefinition of the term 'frontier' moved

away from the confines of the Mississippi Valley and opened multiple lines of inquiry at different stages of development, from the earliest periods of European colonization in the east, to the copper country to the north and great plains region in the west (Lankton 1997; Mann 1984; Mikesell 1960; Nobles 1990). The frontier became a dynamic environment encompassing people, places, and the environment.

Labor historians focused on the frontier for purposes other than that of the social historians. James N. Gregory states that the study of the frontier and labor history had initially two lines of inquiry rooted in journalism and economics (Gregory 2004). It was the 1960s when historians first began to take a serious look at how labor and the frontier synthesized (Gregory 2004). Many of the historians focused on the effects of industrialization on the frontier whereas the new labor historians such as Herbert Gutman detailed the *process* of industrialization on the frontier. In his seminal piece, *Work, Culture, and Society in Industrializing America*, Gutman (1976) details the progression of transforming large agricultural societies in the eastern United States into a collection of mill and factory communities. He details the struggles of converting an agrarian society into an industrialized community. This process was repeated on the boundaries of the frontier where resources and labor were plentiful.

Kenneth E. Lewis (2009), a historical archaeologist, provides a model for the study of the frontier economy from an archaeological perspective. In his article, *Frontier Change, Institution Building, and the Archaeological Record in the South Carolina Backcountry*, Lewis uses the South Carolina Back Country as a focus of his interpretation of the development of institutions and socio-economics along the frontier. He argues that isolationism, lack of centralized structures, and adaptive strategies combined to form

unique indigenous social and economic institutions (Lewis 2009). The network that developed through trade partnerships, marriages, and associations created a system of economic exchange outside the influence of east coast economies (Lewis 2009).

In summary, the studies of the frontier, from Frederick Jackson Turner to the new labor historians have, for the most part, framed the frontier in terms of its difference from the East. The West, it was argued, is different from the East, and its large cities that serve as centers of capitalism. The people of the West forged ahead without the safety net of capital (Gregory 2004). This argument can be applied to the frontier at differing points of time and at different places. The economic system that developed on the frontier has its foundation in the East as colonial power waned and pioneers moved into areas beyond the influence of governmental control. The frontier exchange pioneered by the town merchant and supplied by manufactured goods was developed east of the Mississippi River. This form of frontier economics continued until well after the line of the frontier moved beyond southwestern Pennsylvania.

Frontier Merchants and Brownsville

The Upper Monongahela Valley of Pennsylvania provided an ideal location for industrialization. Waterpower was abundant in the form of gradients in rivers, secondary streams, and a myriad of minor tributaries crisscrossing the Appalachian Plateau.

Frontiersmen from the eastern portion of the state made their way to the banks of the Monongahela through many of the well-used Native American trails leading into the region. The Native Americans along with early explorers to the region understood the importance of using rivers and streams as quick, efficient transportation. The river was an

important thoroughfare for French fur traders, Native Americans, and pioneers traveling west. The river's natural flow northward from what was then the Virginia Territory and its intersection with the Ohio and Allegheny rivers made it the fastest route to the interior of the continent.

During the early 18th century, farmers from Pennsylvania's interior slowly moved west and into the Monongahela Valley to set up subsistence agriculture. These farmers differed from others to the south that based their agricultural pursuits on cash crops such as tobacco or cotton (Usner 1987). These were small scale farms that redistributed their surplus based on personal, face-to-face interactions. Families traded goods that were produced on the farm with other families in exchange for excess labor or diverse goods (Nobles 1990; Usner 1987). These small scale transactions did not require the intercession of a merchant (Nobles 1990). Numerous farmers wanted to gain wealth through acquiring capital goods such as land and livestock (Buck 1936). These farmers came from diverse ethnicities such as English, German, Scotch, and Irish descent. They came from neighboring colonies such as Virginia, Maryland, and Pennsylvania's eastern areas (Buck 1936; Ellis 1882; Hart 1906; Kussart 1930).

The pioneer tradesman's main form of business lay with exchanging manufactured commodities with Native Americans. Known as the frontier exchange, it represented the interactions of multiple multiethnic groups participating in a cross-cultural trade network (Usner 1987). Items such as furs, corn, and game were often exchanged for axes, rifles, and kettles. These transactions were highly personal, often one-on-one, and exchanged not only physical items, but also ideas, ideologies, and methods (Usner 1987). Individuals engaging in the frontier exchange traded news,

information, and culture. These frontier merchants were little more than pioneer traders, amassing goods from other traders entering and exiting the area. They were not interested in creating a surplus or in staying in one place for too long a period.

After the Revolutionary War, the region experienced an influx of immigrants as the government paid debts to soldiers with land grants west of the Appalachian Mountains. With this migration came a new merchant class that differed from their predecessors. White settlers were pushing native populations westward and closing the colonial trade networks with the Native Americans. The new merchants were not interested in selling goods to Native Americans; instead they set their eyes on their settler compatriots who were going to open new markets westward. These merchants were also set apart from their predecessor's mobile/nomadic lifestyle. The new frontier merchants often had supply connections with markets eastward and sought out new and expanding markets to the west. They wanted to open new markets by basing their operations in prominent locations such as towns. They wanted to procure resources from the hinterlands and beyond. This new class of merchants was concerned with selling goods for capital gain and creating a surplus of wealth. The Monongahela River provided a transportation outlet for goods and services to reach the scattered settlements throughout the Ohio country. Settlers in the area used the abundant source of water power to establish sawmills, gristmills, and boatyards as the first businesses in the region.

The traders who came into the area to establish trading posts were quick to note that supplies were scarce due to poor roads and lack of infrastructure. In order to make a profit, goods needed to be locally produced to make up for gaps in imports. Traders quickly set up sawmills, blacksmith shops, and boatyards before the more permanent

settlers in the area began agricultural exploits (Buck 1936). The isolation beyond the boundary line of the frontier led to insulated pockets of industrialization (Lewis 2009). Isolation also led to the independent and circumscribed development of infrastructure outside of the sphere of influence of East Coast commercial establishments.

Locally available resources such as iron ore, wood, clay, and coal provided the necessary building blocks of indigenous industrial development at core centers along the Monongahela River. Towns such as Brownsville, Bridgeport, Fredericktown, Elizabeth Town, Williamsport, and Pittsburgh utilized local resources to supply the regional populations with products. The new merchant class was unspecialized, often owning two or more small industries in the towns. These industries were operated from the merchant's home or small shops and employed one or two apprentices to assist in their trade (Buck 1936). Money was scarce on the frontier. Goods and services were paid in the form of produce, credit, livestock, money, or labor (Buck 1936; Lewis 2009; Mann 1984).

Merchants in the town were links in the community between the eastern import business and the western export trade. The establishment of market houses in the towns was a physical symbol of increased trade and capital accumulation within the region. These market houses served not only as a place where local farmers and merchants sold or traded their goods, but they also acted as places where the exchange of ideas, community building, organization, and industrial planning took place (Lewis 2009; Nobles 1990). By the end of the 18th century, infrastructure and social institutions were replicated in the Monongahela Valley to match those of their eastern counterparts. The merchant class was laying the foundation for industrialization based on new modes of

production, capitalism, and new methods of transportation (Nobles 1990). In particular, the Monongahela River was going to be the test bed for new technologies and innovations in river transportation driven primarily by the merchant class.

The early merchants relied on the rivers where goods were transported easily during the fall and early spring. The technology most prevalently available to the trader was either the birch bark canoe or the pirogue, which was a dugout canoe (Carson 1920; Ellis 1882; Kussart 1930). Both French and British forces in the area used larger flat-bottomed vessels such as batteaux to move troops and supplies along the river. These barges were commonly used in the fur trade and could reach lengths of sixty feet with a width of six feet. Their construction was of rough hewn boards and they were made at strategic points along the river. These boats required a large amount of labor to construct and were generally out of the reach of most independent traders.

With the annexation of Louisiana by Spain in 1763 from the French, the Spanish opened the West to increased trade in furs, lumber, and tallow (Carson 1920). Early attempts to use the rivers to open trade networks extending eastward into the port of New Orleans met with limited success. Expeditions from Pittsburgh throughout the 1770's failed to establish regular commercial trade. Trade networks remained stagnant throughout the Revolutionary War period until the 1780's. In the winter of 1781, two French traders, Messrs. Tardiveau and Honore, made the first journey with the aim of establishing commercial ties with New Orleans from Redstone Old Fort (Brownsville), Pennsylvania (Carson 1920; Williams 1882). They would later move their trading operations to Louisville, Kentucky and maintained business interactions with ports along the Mississippi River.

The type of vessel that Tardiveau and Honore used in their trade is unknown. However, a technological advancement pioneered by Jacob Yoder of Brownsville changed the way trading and transportation was carried out on western waters. In 1782, Yoder invented the flatboat and ushered in an era of commercialization that lasted throughout the early 19th century. In May of that year, Yoder made the journey from Redstone Old Fort to New Orleans and sold his cargo of produce and his boat to a Spanish commander in exchange for furs and hides. He then traveled to Baltimore to sell his goods at a profit (Wiley 1937; Williams 1882). Jacob would make the trip again, but this time he incurred a loss of money and abandoned the business (Williams 1882). Jacob Yoder's trips took an average of 6 months to complete round trip (Kussart 1930; Wiley 1937).

The commercialization of the river occurred due to three reasons. The first was the merchant class building sawmills along points of the Monongahela River allowing for the construction of larger, higher quality boats. The second was the opening of the Louisiana territory to trade. The third was surplus created by the merchants constrained by the high cost of shipping materials eastward over the Appalachian Mountains to the East Coast. Zadok Cramer (1817) writes about the costs associated with shipping goods from the east to the west using the west branch of the Potomac in the *Navigator*,

“Goods are frequently boated up from Alexandria, Georgetown, &c. as high as Fort Cumberland, whence they are taken in wagons to Brownsville, a distance of 80 miles. By this route it costs about \$2.50 per hundred pounds, from Alexandria to Brownsville, which is a savings of about \$2.50 in the 100 lbs. when bought all the way by land” (Cramer 1817).

Isolation forced the merchants to look for newer expanding markets to sell goods and services. The new market frontier targeted by the merchant class was the multitude of settlers heading west who needed supplies to start new lives. Immigrants using the Braddock Road traveled from Fort Cumberland in Cumberland, Maryland, through a series of passages in the Appalachian Mountains to arrive in Redstone Old Fort (Brownsville) 80 miles west on the banks of the Monongahela River. These settlers needed supplies that included locally produced items such as flatboats, provisions, stoves, farm implements, nails, and clothing.

Traders, who entered the area, based their mercantile business on a different distribution and industrial diversification model that was largely out of the reach of merchants in the East. These merchants had an advantage when they crossed the Appalachian Mountains from the east. Heavy capitalization costs of starting new businesses in the eastern half of the state were nonexistent in the West. Eastern merchants who were well established catered to a local group of consumers, thus limiting their ability to expand. Competition between eastern merchants saturated the markets and allowed for limited growth.

Merchants, establishing businesses in Brownsville and along the river, established business networks and chains of investments that were scattered throughout the Monongahela Valley. The immigrant push to travel the river and their demand for boats prompted many merchants to diversify their businesses and reach into products and services outside of their already established proprietorships. An example of this diversification in mercantilism can be seen in the business decisions of Jacob Bowman. Bowman was originally from Maryland and traveled to Brownsville in 1789 (Ellis 1882;

Thurston 1859). His mercantile business transported goods from the East over the Appalachian Mountains using packhorses at a cost of \$3 per pound of goods. Bowman established a trading post in Brownsville in 1791 followed by the construction of a nail factory and boat yard. This type of diversification of businesses by merchants led to a steep rise in capital investment in the town and less dependence on the eastern United States to provide finished goods or raw materials.

The high demand for shipping by merchants in Brownsville led to an increased investment in boat building facilities along the river. The boat building industry was laying the foundation for increased investment into Brownsville by the merchant class and creating a framework for river transportation that would dominate the 19th century and lead to the development of the steamboat.

Settlement of the Brownsville Area

The blazing of the Braddock Road in 1751 and the creation of an Ohio Company storehouse at Redstone Creek, opened access to the Monongahela River Valley for the military, pioneers, settlers, and merchants.

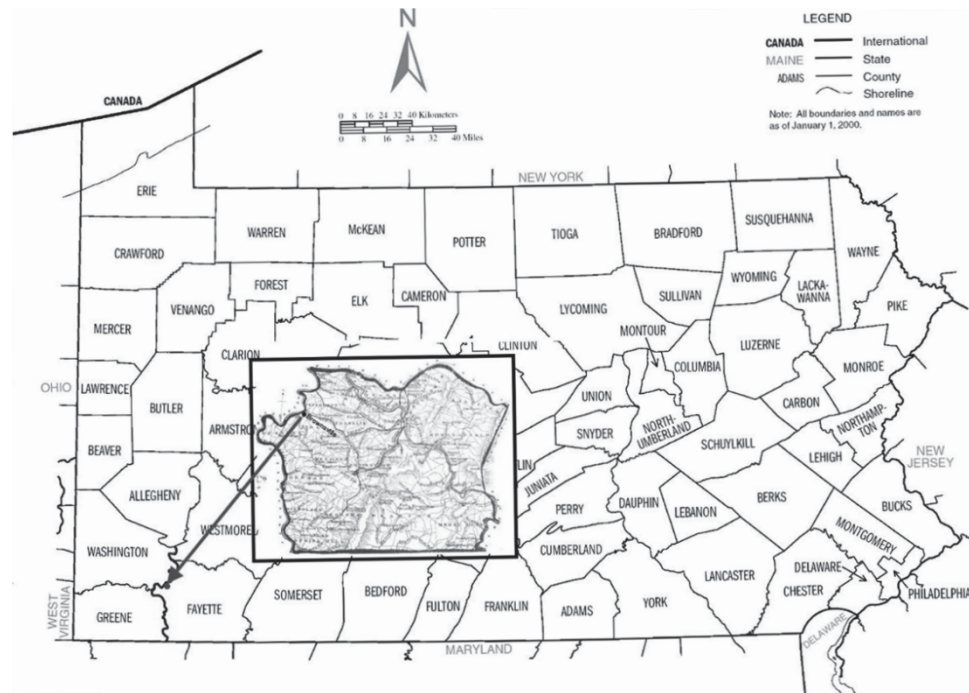


Figure 1. Map of Fayette County with arrow indicating Brownsville's location. Adapted from Ellis (1882).

In 1759, Colonel James Burd extended the Cumberland Trail to Redstone Old Fort (Brownsville) and established Fort Burd in October of that year on a bluff overlooking Nemacolin Creek (Dunlap's Creek) and the Monongahela River. The fort was built on the site of a prehistoric earthwork that had been given the name Redstone Old Fort. "Redstone" was taken from the name of a nearby creek north of the fort with reddish iron-bearing sandstone slopes. "Old Fort" was the name given to Native American mound complexes by early pioneers. The Fort's purpose was to establish a

British military presence in western Pennsylvania and to monitor French troop movements in the area.

Fort Burd's main purpose was to provide defense from Indian attacks and offer a clear English presence on the western frontier (Ellis 1882; Hart 1906; Thurston 1859).

The fort was ordered built by Colonel Boquet in Carlisle, Pennsylvania, in response to the beginning of the French and Indian War (Ellis 1882; Thurston 1859). The French had already made their presence known by their occupation of western Pennsylvania and the construction of Fort Duquesne where present-day Pittsburgh now stands. Colonel Burd's first order was the construction of a road from Shippensburg, Pennsylvania, crossing the Appalachian Mountains and linking a road previously cut by British General Braddock in his attempt to attack the French occupied territory (Ellis 1882; Thurston 1859). After the French and Indian War (1754-1763), the Ohio Company storehouse was burned and Fort Burd fell into disrepair.

Fort Burd provided a rendezvous point for military operations that were used to spy on Native American movements. One of the men, involved in these operations was Colonel Michael Cresap, who was a trader and veteran of Lord Dunmore's War of 1774 (Ellis 1882). Cresap bought a Virginia title to several hundred acres of land and built the first house of hewn logs and nailed shingled roof west of the Appalachian Mountains. In 1770, Cresap built a trading post at the mouth of Dunlap's Creek and established the first rope ferry to cross the Monongahela River. At this time, Thomas and Basil Brown settled into the area and purchased several tracts of land from Cresap. The two brothers planned out the town that took their name and intended it as a stopover on the "Whiskey Path" (Ellis 1882; Kussart 1930; Thurston 1859). This route was used by western farmers

shipping whiskey across the Appalachian Mountains to towns and cities to the East.

Thomas Brown established the first factory in town, a flour mill, on Redstone Creek (Ellis 1882).

Merchants who entered the area in the late 1780s purchased property from the land agents, Thomas and Basil Brown. These brothers bought the rights to the land from Colonel Michael Cresap and used his house for a base of operations (Ellis 1882). They were in charge of surveying the plots and distributing the land for profit. The town originally was called Redstone, after the ferrous sandstone that lines the creeks and streams. However, as time passed, the town's name changed to Brownsville reflecting the name of the land agents and their work in populating the town.

The Browns understood the importance of the location of Brownsville, which was lay at the end point of the Cumberland Road. The western frontier lay just across the Monongahela River. Brownsville was also a pivotal area on the Whiskey Path, where farmers transported their alcohol eastward to the cities of Philadelphia and Boston. However, it was access to the northward flowing Monongahela that was the most valuable commodity to the town. From here, people and goods were transported to Pittsburgh and then onto the Ohio and Mississippi Rivers.

When the first families settled in the Brownsville area they brought with them the provisions necessary to start farming and establish homesteads. Items that could not fit onto the Conestoga wagons were manufactured locally. The first industry established in the area was a group of sawmills located along the river. These mills not only provided lumber for the establishment of houses and outbuildings but also supplied the growing need for the construction of boats.

Brownsville, after the Revolutionary War, provided a stopping and gearing center for pioneers headed toward Kentucky and the southwest. Water transportation along the northward flowing Monongahela River was faster than the overland journey through thick forests and mountainous terrain. The plentiful wood and gently sloping banks that surrounded Brownsville facilitated the building of flatboats and keelboats with easy access to the waterfront. The rapidly expanding boat-building business helped transform Brownsville into a center of trade and expansion. John Moore, an early settler of Brownsville observed:

...in the long cold winter of 1780, the snow was three to four feet thick and crusted. The road [National Road] to Brownsville was lined on both sides with wagons and families, camped out, [waiting] for the loosening of the icy bonds from the waters and the preparation boats to embark to the West, the men dragging old logs and stumps for fuel to save their wives and children from freezing (Ellis 1882).

The Monongahela River was not only considered the boundary between the East and the Western Frontier. It was increasingly viewed as the highway to embark for the settlement of the West (Henshaw 2004). In 1787, flatboats were being constructed at Brownsville for use in the George Rogers and Clark Expedition to pursue British and Native Americans and force them from the Northwest Territories (Wiley 1937). This secured Brownsville as a strategic location for the deployment of troops to the western territories. That same year upwards of 120 boats passed by Pittsburgh on their way to Kentucky with an average of fifteen persons each adding hundreds of settlers to that area. Once Brownsville constructed its first lumber yard next to its boatyard, the local

economic structures were in place for mass construction of vessels. The flatboat was little more than a floating platform with a flat bottom and a shelter placed on top. The boat had to carry all of the provisions (food, cooking implements, etc.) for a three to six month journey and tools for farming and establishing a home on the frontier (Kussart 1930; Wiley 1937). Often settlers were held up for weeks at Brownsville awaiting the completion of their boats. By the 1790s, keelboats were being constructed at the yards. These vessels had a more traditional boat hull and were used for up and down stream travel (Ellis 1882; Kussart 1930; Wiley 1937). Wooden poles were used to help navigate and maneuver the boat, or in some instances, mules or horses were used to drag the boat upstream on swift currents. In 1796, an emigrant from Connecticut who traveled to Brownsville from Morgantown, West Virginia, quoted a local man as saying, "...in the spring seventy boats passed Redstone [Brownsville] in one day with families headed to the Ohio"(Kussart 1930).

Conditions on the Monongahela River fluctuated in the course of a season. Trips were planned for early spring to take advantage of high water. Rapids, sandbars, waterfalls, river pirates, thieves, and Native Americans all contributed to the perilous journey of the settlers headed west. Franklin Ellis (1882:421), a county historian, commented:

If they [settlers] had rightly timed their journey, and the melting time soon came after their arrival at the place of embarkation, then all was well with them, but if spring thaws delayed their coming, and the shivering, home sick wayfarers were compelled to wait for weeks in their comfortless shelters awaiting an opportunity to proceed.

Brownsville borough was one of three boroughs that comprised the town in the 18th and 19th centuries. Bridgeport, separated by Dunlap's Creek from Brownsville, was settled by Quakers in 1763 and the town was laid out by Reese Cadwallader in 1794 (Ellis 1882; Thurston 1859). It had its own churches, schools, doctors and industries. Bridgeport, as a community, shared collective identity with Brownsville as a whole (Hart 1906). The third borough is West Brownsville, located on the opposite shore of the Monongahela River in Washington County. West Brownsville's importance would grow in the 19th century as the steamboat industry migrated from Brownsville.

The Early Steamboat Era 1811-1865

The development of the steamboat industry in the Monongahela Valley in the first half of the 19th century is largely unexplored. Historians tend to focus on larger events such as the War of 1812 or the beginnings of the great migration westward. Little has been explored of the relationship between many river towns becoming boat building centers and their transformations due to the Industrial Revolution and river transportation. The Early Steamboat Era was a time when mill and factory owners tied the manufacturing of goods to the building of steamboats in order to obtain cheaper resources and control the costs of shipping their products. It was not uncommon to have owners of mills also be operators of steamboat yards. This marrying of two industries is not unique. For example, iron forges often controlled collieries for charcoal production and the wagon system for transporting the goods. The Early Steamboat Era opened transportation routes further into the heartland of the United States to ship finished products and to obtain resources and raw materials to manufacture products. As we see in the case of

Brownsville with the construction of the *Enterprise*, it successfully accomplished this transportation feat before Pittsburgh, and created the paradigm for inland river transportation that would dominate the 19th century.

The Early Steamboat Era on the western rivers began with the construction of the steamboat *New Orleans* in Pittsburgh in October of 1811. This period was marked by the rapid construction of boatyards and foundries along the Monongahela River to support this new riverine industry. Boatyards spread westward from the Monongahela Valley to the cities and towns along the Ohio and Mississippi rivers. Businesses and investors were eager to capitalize on the steamboat's ability to quickly transport goods and people over long distances.

This era is well positioned within the frontier economy as loose inter-firm relationships, usually based on family businesses within ethnic or religious groups such as the Quakers, formed partnerships with other businesses to invest in the steamboat industry (Pearson and Richardson 2001). These small mercantile firms pooled their resources in order to fund the construction of a steamboat(s) from local boatyards and then use them to transport their own goods for sale or trade.

The *New Orleans* was constructed by Nicholas Roosevelt as a part of a business partnership with Robert Fulton and Robert Livingston (Latrobe 1871). The steamboat was constructed at a boatyard in the New Birmingham section of Pittsburgh on the banks of the Monongahela River. The vessel was built of white pine and measured 138 feet in length and twenty feet wide (Cramer 1811). The vessel had one cabin located in the hold (Dahlinger 1911). There were four berths in total. The *New Orleans*, designed from ocean going vessels, had portholes and sails. The crew consisted of pilot, Andrew Jack; an

engineer, Nicholas Baker; six deckhands, two female servants, a male waiter, a cook, and Roosevelt's wife (Latrobe 1871). Nicholas Roosevelt acted as "captain", but records at New Orleans indicate that the engineer, Nicholas Baker was acting captain at the completion of the trip (Dahlinger 1911). The machinery for the *New Orleans* was transported overland from New York as Pittsburgh did not have the industrial capacity or knowledge base to construct the steam engine (Dahlinger 1911; Latrobe 1871). The main purpose of the *New Orleans*'s trip was not to establish a trading route from Pittsburgh to New Orleans, but from New Orleans in Louisiana to Natchez in Mississippi (Dahlinger 1911; Latrobe 1871).

The *New Orleans* was not only designed to be an experimental vessel, it was also a centerpiece in the Fulton-Livingston-Roosevelt company to be used to attract buyers of like vessels. The success of the *New Orleans* would compel Fulton and Livingston exclusive monopoly rights to steam navigation on western waters (Hunter 1993). The *New Orleans* made several stops along the Ohio to showcase for local officials the future of transportation, and to perhaps garner future investments in the company.

The voyage coincided with several unusual events. After the *New Orleans* passed St. Louis, a twin-tailed comet could be seen from October to April of 1811 illuminating the Mississippi Valley, a great squirrel migration occurred when tens of thousands of the animals migrated south, and the first of the New Madrid earthquakes occurred on December 16th of that year (Latrobe 1871). The earthquake decimated both American and Native American communities along the river, prompting some native groups to wonder if the "Penelore" or fire canoe was associated with the comet and the ensuing catastrophe (Latrobe 1871).

When the *New Orleans* arrived at the city of New Orleans under its own power, it was thought that trade to the western half of the United States was opened. However, the technological deficiencies were soon realized. The *New Orleans* was outfitted with a single-bore low pressure steeple steam engine based on a James Watt and Matthew Boulton design, but without a walking beam (Dahlinger 1911). While the *New Orleans* was capable of traveling between Natchez and New Orleans, the design of the vessel based on sailing ships, and its low pressure steam engine placed the *New Orleans* at a disadvantage during periods of low water and the fast moving currents of the Mississippi River.

This voyage did not go unnoticed, especially to the many business owners in the Monongahela Valley. At this time period in Brownsville's history, many of the more successful business owners were Quakers. One was Elisha Hunt, who owned a profitable mercantile shop in town, including several properties. He also sat as the director of the Monongahela Bank. He along with his brother Caleb, who was his business associate, saw the potential for river transportation and recognized that if they wanted to expand their influence, the steamboat was a necessary investment.

Monongahela and Ohio Steamboat Company

The roots of the Monongahela and Ohio Steamboat Company were laid when a merchant from Philadelphia, Joseph White, came to Brownsville on a business trip to expand his business and collect debts in St. Louis, Missouri (Shourds 1876). White was a Quaker, and recognized Elisha Hunt, a prominent businessman and director of the Monongahela Bank of Brownsville by his clothing as being a member of the Society of

Friends and introduced himself (Shourds 1876). Elisha, along with his brother Caleb, owned a mercantile business in Brownsville that sold a variety of goods such as kegs of nails, liver oil for tanning, and a variety of clothing. This chance meeting between the two men opened the door for a partnership for transporting merchandise to St. Louis via keelboat.

Elisha, Caleb, and Joseph left Brownsville in the spring of 1812 with a newly constructed keelboat and a crew of French-Canadian boatmen (Shourds 1876). The boat was loaded with merchandise that was sold at St. Louis, a portion of which was paid for in lead. This lead was sold at Saint Genevieve, Missouri in 1813. Joseph White returned to Philadelphia, and Caleb and Elisha returned to Brownsville. The trip had taken well over 40 days to complete over land after the keelboat was sold. Elisha on his return to Brownsville began to lay the foundation that would be the model for steam river transportation. He knew about the success of the *New Orleans* and envisioned that his own business would benefit from steamboats.

Elisha Hunt traveled to Philadelphia in the autumn of 1812 to secure stock for a company that would construct steamboats and transport freight and passengers between Pittsburgh and New Orleans (Ellis 1882; Hart 1906; Shourds 1876). Hunt secured stock and formed 'The Monongahela and Ohio Steamboat Company'. The stock was divided into six shares of which Joseph White owned two or one third of the company (Shourds 1876). While in Philadelphia, Elisha met with Daniel French who owned a patent for steamboat engines and had a steam ferry in operation in Camden, New Jersey (Maass 1996; Shourds 1876). French told Elisha that his steamboats could make five miles an hour on the rivers upstream (Ellis 1882; Shourds 1876). Elisha Hunt purchased the patent

for the boats and engines and returned to Brownsville (Ellis 1882). French was soon to follow. In the fall of 1812, the Hunts transported him along with his family to the town. French and his family settled in Bridgeport and constructed the first steam engine shop west of the Alleghenies (Maass 1996).

Elisha and French wanted to start two companies to maximize profits. The first was the Monongahela and Ohio Steamboat Company and the other was the Bridgeport Manufacturing Company. This company would consist of a cotton and woolen mill powered by a Daniel French steam engine. Elisha Hunt wanted to buy cotton in the South at cheaper prices and use the steamboats to transport the raw material to the cotton mill. Finished goods would then be sold in the North or shipped south by steamboat. The beginning of this manufacturing enterprise was reported by Robert Rogers, a local potter in 1811 in his diary,

“About 1811, Daniel French arrived here from Philadelphia with big schemes of manufacturing, steamboat building, and navigating western waters. He told people great advantages would accrue, and induced many prominent citizens to subscribe to stock for a cotton factory and two steamboats, all new to people here; but they were wise enough to secure charters for each company, viz., one for the factory and one for the steamboats, and they felt a deep interest and believed French, the people subscribed liberally to both. Work commenced, but the enterprise was new to all, and it was a long time before it was completed. And when they were ready there was no one experienced in running factories or steamboats, and neither enterprise made money, but run in debt, and the factory was sold by

the sheriff, and the boats were sold by the company after they had run them as long as there seemed any hope of profit.” (Ellis 1882)

The first steamboat built by French was the *Comet*, a sternwheel paddleboat with the wheel recessed within its hull. Its dimensions were fifty-two feet in length by eight feet in beam and twenty-five ton burden. This boat used French’s patented high-pressure oscillating engine, where the piston was directly connected to the paddle wheel (Maass 1996). As the engine turned the wheel, the cylinder and piston rotated above and below the wheel axle (Maass 1996). This design eliminated many of the linkages and arms that the Boulton and Watt engines used in Fulton’s steamboats. The four major flaws to Fulton’s engine design were cost, increased weight, low pressure, and complicated maintenance. The *Comet*, originally built for the Ohio River, was used in the trade between New Orleans and Natchez after it was rebuilt from an unsuccessful maiden voyage (Maass 1996).

The Monongahela and Ohio Steamboat Company entered full operation in August of 1813 with twenty-four wealthy Brownsville citizens investing (Maass 1996). The initial \$11,000 was raised for building a packet boat (carrying both freight and passengers) to run between Pittsburgh and the Falls of the Ohio at Louisville (Ellis 1882; Hunter 1993; Kussart 1930; Maass 1996). From what is known about the *Enterprise*, the boat had a shallow draft hull, a keel of around 80 feet and was at least 15 feet in beam. The vessel weighed around thirty tons and was fitted with two masts that were soon discarded, an anchor, a saluting gun, and a winch (Maass 1996; Wilkins 1955). The boat was described as having her machinery in the stern, and a cabin from the smokestack forward. The description of the *Enterprise* reveals a design that incorporated the traits of

a sailing vessel and a western steamboat. The machinery powering the *Enterprise* was a Daniel French high-pressure oscillating steam engine powered by two, twenty-five foot side-by-side horizontally mounted boilers built into the hold. The engine had an output of twenty-four strokes per minute, or around eighteen to twenty-four horsepower (Maass 1996; Wilkins 1955).

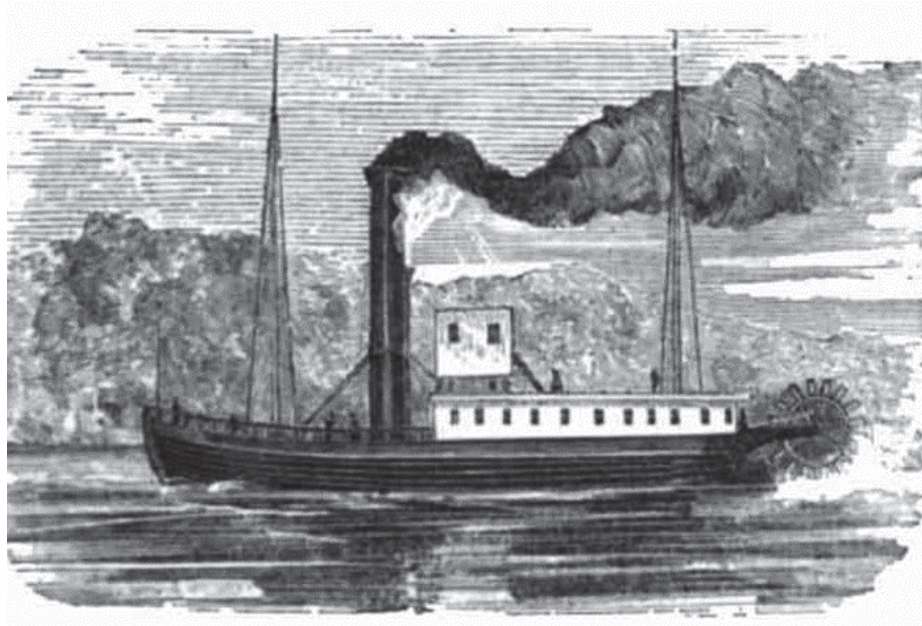


Figure 2. Steamboat *Enterprise*. Woodcut. Unknown Artist.

The *Enterprise* was placed under the direction of Israel Gregg who was a flatboat man who had traveled the Mississippi River in 1803 (Maass 1996). After its initial builder's trials during the freshets of spring, the *Enterprise* set steam for New Orleans departing Pittsburgh in December of 1814 (2009; Ellis 1882; Kussart 1930; Maass 1996) under the command of Captain Henry M. Shreve, an experienced keelboat captain familiar with the Lower Ohio and Mississippi rivers. The *Enterprise* reached New Orleans on January 9th, 1815 and was pressed into service by General Andrew Jackson for the defense of the city during the War of 1812. The *Enterprise* became the first

successful steamboat to be used in a military action, carrying troops, munitions, and supplies until March 15, 1815 (Hunter 1993). When Shreve was finally able to pilot the *Enterprise* upstream to Louisville in twenty-five days, the success of the voyage proved that steam navigation was possible and carried with it the possibilities of profits from trade.

Upon the *Enterprise's* return to Brownsville, the Monongahela and Ohio Steamboat Company had already launched their second boat, the *Dispatch*. The *Dispatch* had a keel of 80 feet and a beam of 11 feet and weighed in at 20 tons (Maass 1996; Wilkins 1955). The boat had a recessed stern wheel and was considered *Enterprise's* twin. She was under the command of Israel Gregg until reaching New Orleans after which, H. Bruce replaced him as captain. The *Dispatch* made the trip from Natchez to the Falls of the Ohio in a record twenty-four days beating the boats of the Fulton line. The high-pressure engines used by Daniel French set the standard of western steamboats beating the low pressure engines of the Fulton line.

The Monongahela and Ohio Steamboat company would not last into the 1820s. Its failure was based on factors including the lack of experience of any of the directors in transnational shipping. They had no ability to run freight and passengers over long distances for profit on boats which were, at the time, unreliable. The entire transportation network depended on the high rivers of the winter and spring to provide the freshets, or high water to make the long journey over sandbars and rapids. As an example, Israel Gregg, on the trial run of the *Dispatch*, had to wait two weeks for high water to get the boat dislodged from a sandbar in the Ohio River. For passengers and freight, this type of incident proved expensive and all too common.

The Monongahela and Ohio Steamboat Company eventually failed to raise enough capital from the public to continue building steamboats. The company began selling its assets such as tools (plane irons, chisels, hand saws and files) and boat hardware (chest and cupboard locks, knob locks, hinges) on August 17th 1816 (Gregg 1816). Cephas Gregg, Israel Gregg's brother was listed as Secretary of the Board.

Henry M. Shreve left the company to build his own boat in Wheeling, West Virginia. He chose Wheeling as it was a deep water port on the Ohio and not as susceptible to the range of water depth the Monongahela was known for (Maass 1996). In September 1815, Shreve laid the keel of what was to become the 403 ton *Washington*, a stern wheel steamboat from which all other steamboats would be patterned. The *Washington* was 136 feet 9 inches in length and 24 feet 9 inches in beam with two decks (Hunter 1993; Maass 1996). Shreve changed the layout of the placement of the boilers. All previous boats had their boilers and engines below deck, in their hold. The *Washington* had the boilers and machinery on the main deck while leaving the below deck space for a hold for cargo (Hunter 1993; Maass 1996).

The evolution of decks on the western steamboats begins with the early boats such as the *New Orleans* and *Enterprise*. Both of these boats had a deck to the gunwales and cabins built into the hull. The captain of the *New Orleans*, and possibly the *Enterprise* stood outside exposed to the weather at a helm much like sailing vessels of the day. Shreve, by placing the pilothouse on the main deck, eliminated room necessary to transport passengers. He built a deck above the main deck that extended 60 feet to 80 feet along the length of the boat (Niles 1816). This deck contained the main cabin, three private cabins, and a bar/lounge. Forward of the main cabin was a drawing room and a

bed exclusively for female guests (Hunter 1993; Maass 1996). This deck also contained the captain's cabin and room for twenty berths.

The technological improvements to the *Washington's* engines would also set the standard for next generation of western steamboats. Shreve contracted with Daniel French of Brownsville to create the new engine for this new type of boat. The use of French's oscillating engine to generate the necessary power to propel the 400 ton *Washington* against the currents of the Mississippi would require an enormous and impractical cylinder (Maass 1996). French designed a new high-pressure horizontal engine, possibly based on William Symington's 1801 design, connecting the piston to the paddle wheel directly through the use of a pitman arm (Maass 1996).

The design of the *Washington* along with French's horizontal cylinder became the standard design of all western steamboats throughout the 19th to the mid-20th century. As steamboats grew in length and breadth, they grew vertically as well. New decks were added to accommodate the growing passenger lists and the growing crews during the Early Steamboat Era. Whatever technological advancements and innovative designs made a success of the *Enterprise* and the *Washington*, their success ushered in a new working class, based on river transportation, slackwater improvements, and commerce.

The Early Steamboat Era in the Monongahela Valley was based on individual entrepreneurialism and partnerships which were unchartered and based on a web of networks within the community (Pearson and Richardson 2001; Wilkins 1955). An example of this is the construction of the steamboat *Reindeer* in 1825. The *Reindeer* was financed through Robert Rogers, Cephas Gregg, Abraham Kimber (who was also her captain), and a few others (Wilkins 1955). Abraham Kimber had as much interest in

seeing the success of the boat as the other men. Robert Rogers, of *Dispatch* fame, was a local potter whose uncle was Israel Gregg (First captain of the *Enterprise*, then the *Dispatch*), worked for the Monongahela and Ohio Steamboat Company (Ellis 1882). Cephas Gregg, also a potter who apprenticed Robert Rogers, was a manager for the Monongahela Navigation Company in 1837(Ellis 1882).

In Brownsville, these business connections were sometimes laid along religious lines. A majority of business owners were Quakers and they invested heavily in river transportation and improvements. These networks were held together by the strong familial ties that many of the early investors in chartering construction of steamboats possessed. Any money that the boat made was dispersed to the crew and operating expenses. Any profit went to the owners. If business was tight due to lack of demand or poor river conditions, then a boat was laid up and her crew let go until conditions were favorable (Hunter 1993). Owners of a steamboat could include the captain, the boatyard from which it was built, businessmen, or a combination of the three.

On November 13th, 1844, the Pittsburgh and Brownville Packet Company was formally organized. This was also the first day that slackwater improvements began operation.

“We learned that a company, with ample capital, was formed yesterday by gentlemen, in this city and Brownsville, to put a double daily line of splendid new coaches on the National Road, to run between Brownsville and Cumberland, and to connect with Pittsburgh by first class steamboats on the Monongahela improvement. The character of the gentlemen composing this company, for wealth and enterprise, is a

guarantee to the public of its efficiency.- Pittsburgh Morning Chronicle, September 5th, 1844” (Kussart 1930).

The original stockholders of the company were General J. K. Moorhead, George W. Crass, John L. Dawson, Captain Adam Jacobs, Samuel Clark, and I.C. Woodward. Not only were these men part owners of the new boats in their line, but many of them also owned substantial shares in the Monongahela Navigation Company. The starting packet steamboats were the *Josephine*, *Consul*, and *Louis McLane*.

The formation of the packet companies such as the Pittsburgh and Brownsville Packet Company, People’s Packet Company, or the Brownsville and Geneva Packet Company to name a few, largely benefitted the stockholders. Most transportation in the Monongahela Valley was under the control of independent owners who bought shares of a steamboat. It was common to have several individuals own stock in several different boats.

In this early period of the steamboat industry, there is little information about the people who worked on the boats. At the launch of the *Dispatch*, there were only the *Enterprise*, *New Orleans*, *Vesuvius*, *Aetna*, and the *Buffalo* steamboats making regular stops along the Mississippi River. The early crews on these boats could have multiple roles during a voyage. Robert Rogers who kept a diary of his trip aboard the *Dispatch* had the original position of second engineer. When Israel Gregg left the boat at New Orleans, H. Bruce became captain and Robert Rogers moved into the position of first engineer. By the time the *Dispatch* reached the Falls of the Ohio, Rogers was also the boat’s clerk responsible for keeping the ship’s manifest of passengers and cargo and acted as steward for there “were none on board” (Ellis 1882). There is slightly more

information from Latrobe's account of the *New Orleans* and its trip down the Mississippi River. He describes the crew as containing a pilot, an engineer, six deckhands, two female servants, a male waiter, and a cook.

Little is known about the racial composition of these early crews in the first two decades of the 19th century. A small window from Robert Rogers' diary may shed light on the presence or lack of presence of African Americans on the initial trip of the *Dispatch*:

Dispatch proceeded down the river, but "struck on the bar at Wheeling [West Virginia] on the island side, and having no niggers on board we were compelled to jump into the river full of floating ice as it was, to pry her off with rails" (Ellis 1882).

The entry in Roger's journal indicates that on other journeys, it was standard practice for African Americans to be on board the boats for menial jobs. Before the Civil War, African Americans played a role as a class of steamboat workers in the Monongahela Valley, often serving as fireman, deckhands, stewards, and cooks. Female blacks occupied roles as chambermaids, maids, cooks, and servants (Buchanan 2004).

During this early period of steam navigation, the limitations of the natural river cycles of highs and lows on the business of shipping and transportation were becoming apparent. Most of the steamboats built in the Monongahela Valley were for use on the Mississippi River where water depths were largely consistent (Parker 1999). The Monongahela River, for example, could be walked across during the dry summer months since its flow could be reduced to a trickle in some areas. With increased river traffic due

to an influx of emigrants from the east, engineers and business owners turned to the huge undertaking of improving the river for navigation.

Slackwater Improvements: Monongahela Navigation Company

The successful voyage of the *Enterprise* marked a turning point in river navigation on the Monongahela River (Henshaw 2004). The demand for supplies and finished products was a direct result of an influx of settlers traveling the National Road (present day Route 40) into the Monongahela Valley where they embarked on their journey westward. This journey began at Brownsville, the western terminus of the National Road. This great migration prompted Congress to resurvey the Monongahela River valley for the purpose of the improvement of steamboat navigation to relieve the pressure and congestion of increased traffic (Ellis 1882; Kussart 1930). Reports to Congress in 1833 and 1834 recommended that a series of locks and dams be constructed to maintain a maximum lift of four and a half feet of slackwater (Thomas and Watt 1903). The recommendations went unanswered until the formation of the Monongahela Navigation Company in 1836 by supporters of river improvements, mostly from business men and entrepreneurs in Brownsville and the surrounding counties of the Monongahela River.

A survey of the Monongahela River in the summer of 1838 by the Army Engineer Corps under the direction of W. Milnor Roberts, Nathan McDowell, and Robert W. Clark found that the distance from Brownsville to Pittsburgh was fifty-five and a half miles with an ascent of thirty-three and a half feet (Veech 1873). On the opposite journey, from Brownsville to the Virginia [West Virginia] state line, the river ran thirty-

five miles with an ascent of forty-one feet. In total, they found that the Monongahela River runs a course of ninety and a half miles from the Virginia border to Pittsburgh at a total ascent of seventy-four and a half feet. If the Monongahela Navigation Company were to proceed with a pool level of four and a half feet, then a total of seventeen locks and dams every five miles would have to be built. This was unacceptable since the delays for the collection of tolls at each lock and dam, not to mention the time needed to lock each steamboat would bring river commerce to a standstill. The solution was to build the dams 8 feet in height (Veech 1873).

Construction began in 1838 on Lock and Dam numbers 1 and 2 when the Monongahela Navigation Company was awarded contracts to begin slackwater improvements. Lock #1 was located at Pittsburgh, Pennsylvania, and Lock #2 about ten miles above at Braddock's Upper Ripple at the mouth of Turtle Creek. A brief description of these two locks and dams is given by Thomas and Watt (1903) as averaging over 900 feet long from lock to abutment and sixty feet wide at the base. The dams were constructed of timber cribs filled with riprap and the gates of the locks were of mitered wood. These gates were operated by water and steam power to both pump and drain the chamber and to operate the doors. By 1848, these locks were in full operation to river traffic.

Lock and Dam Number 3 was constructed by Watson Run, fourteen miles up from Lock Number 2. Its construction was completed in 1844 concurrently with Lock and Dam Number 4 at Belle Vernon, Pennsylvania. Their dimensions and construction material was of the same type as the first two locks and dams (Kussart 1930; Thomas and Watt 1903).

For the first time on the Monongahela River, slackwater improvements made regular navigation possible between Brownsville and Pittsburgh. The average depth was kept at a manageable level of around six feet. However, during periods of drought, the water level could drop to as little as four feet in depth. These early locks and dams were insufficient from the start of construction; their design allowed for only one vessel to enter and leave in one direction at a time, and this created a backlog in river traffic (Kussart 1930).

The increased shipping of materials such as coal and cargo during the midpoint of the 19th century occurred as industrialization took a foothold in the Monongahela Valley. Pressure to alleviate river congestion prompted the Monongahela Navigation Company to improve its existing locks and dams. Lock and Dam numbers 1 and 2 were upgraded with second lock chambers and completed in 1848 and 1851 (Thomas and Watt 1903).

The cost of construction and upgrades of the lock and dam system left the Monongahela Navigation Company in debt with little revenue from river tolls. The cost of tolls over the entire length of the slackwater improvements was \$2.91 per thousand bushels of coal (Ellis 1882; Kussart 1930; Veech 1873). The State Act of 1854 required the company to complete the lock and dam system to the state line of present day West Virginia by December 1, 1857 (Kussart 1930). Lock and Dam Number 5 was constructed at Denbo, Pennsylvania about two miles north of Brownsville. Lock and Dam Number 6 was built at Rices Landing, ten miles above Lock and Dam Number 5. Finally Lock and Dam Number 7 was constructed at the mouth of Jacobs Creek (Thomas and Watt 1903).

With slackwater improvements in place, river navigation was no longer at the mercy of Mother Nature's high and low water cycles. The early lock and dam system of

the Monongahela Navigation Company replaced the older mill dams responsible for keeping water levels at a consistent height. During high water periods, steamboats could easily pass over the dams which were submerged, or, if of a wicket type, part of the dam was removed to allow the boat to pass through. The new locks provided a system of passing through using the lock chamber so that a steamboat and its tow [barges] could ascend or descend the river regardless of the time of year.

The frontier economy during the Early Steamboat Era was the foundation for these business networks. While large profits could be made by steamboats, often the boats ran at a loss or break-even point due to large expenditures in overhead and maintenance (Hunter 1993). The driving socioeconomic conditions of the first half of the 19th century was western expansion and the opening of the West to eastern markets. However, economically, the frontier economy was slowly being phased out by the 1850s in the Monongahela Valley. Competition from a new technology, the railroad, was placing stress on the loose business models of the steamboat industry. Not only this, but the transition of the frontier economy to an economy based on coal mining and corporate structure was forcing the packet steamboat companies out of business and replacing them with the towboat industry. This transformation became rapid after the Civil War and into Reconstruction.

Worker identity during the Early Steamboat Era was in its formative stages. Workers on the boats lived a more sedentary lifestyle than those that worked on the flatboats and keelboats due to the steamboat's ability to return to its home port after a trip. Being more settled gave the workers the opportunity to have families in the towns where work was plentiful. However, the workforce was still highly mobile, able to pick up

and move when necessary to follow job opportunities. The 1850 and 1860 census reveal that many workers rented their homes.

Workers still only worked during favorable conditions of high water and low ice, although as the locks and dams were completed, more year round work was available. This was creating a full time workforce that would become realized in the latter part of the Middle Steamboat Era with the towboat crews.

Chapter 3: Middle Steamboat Era 1866-1918 and the Archaeology of Identity

The Middle Steamboat Era in the Monongahela Valley was the time period from the close of the Civil War to the end of World War I. I chose these dates as they mark a turning point in the development and organization of the steamboat industry is a stark contrast to the period before it, the Early Steamboat Era. During this middle era, a technological branch of the packet steamboat was started: the towboat. Designed expressly for the transportation of coal and other freight, the towboat was not built for passenger service. In the waning years of this era, the towboat was to become the dominant form of steamboat in the Monongahela, Ohio, and Mississippi river valleys.

The first two eras are used as a cultural backdrop to frame the two steamboat captains whose houses were excavated for this study, the houses of Captain James Gormley and Captain Michael Cox. Captain James Gormley was a product of the Early Steamboat Era during which his symbolic capital translated into wealth when he lived in Brownsville in the 1850s. And Captain Michael Cox, who gained his fortune and notoriety during the Middle Steamboat Era by making investments in companies and taking advantage of the corporate structure that slowly dictated the steamboat industry. The third perspective on the changing steamboat industry was the diary of Captain Joseph Hendrickson that details a captain in transition between the Middle and Late Eras where working on the river becomes a full time career as he worked for both the packet and towboat industries.

The organization of the steamboat industry was also undergoing rapid change. After the Civil War, reconstruction placed a new emphasis on westward migration and the expansion of the railroad into areas that were once only serviceable by steamboat. By the mid- 1870s, the frontier was settled thus closing the book on the frontier economy that many towns in the East were built upon. With the closing of the West, many individual owners of packet boats found themselves out of business while others were investing in towboats. Competition and heavy investment in the railroads placed additional pressure on the packet steamboat industry. As the coal and steel industry in the Monongahela Valley expanded, so too did their acquisition of steamboats under their corporate flag. This consolidation under larger corporations, like US Steel, forced many owner-operators out of the steamboat business.

The Towboat

The towboat was different from the larger packet boats. They were single purpose vehicles meant for “towing” or pushing barges on the river. Towing freight such as coal or even cattle was nothing new to the steamboat trade (Hunter 1993). In the 1840s and into the 1850s, it wasn’t uncommon for the hulls of old steamboats with their machinery removed and loaded with coal to be pulled beside a packet boat or two (Hunter 1993). An example of this is the steamboat *Massachusetts*. Built in Brownsville in 1840, she was used in the packet trade only during high water as the locks and dams on the Monongahela were not completed yet. In 1845, the *Massachusetts* was dismantled and the hull was loaded with 4,000 molasses barrels, 400 boxes of glass, lumber, and 4 wagons all destined for New Orleans (Wilkins 1955).

Traditionally up until the 1840s, coal was transported on the Monongahela, Ohio, and Mississippi rivers via vessels called “coal boats” (Hunter 1993). The boats were, much like flatboats, flat on the bottom, square at the bow and stern. They were often crudely built, leaky, and expendable. Hunter (1993) explains that these boats laden with somewhere between ten to twenty thousand bushels of coal would draw as much as eight feet of water, and were like the flatboat, at the will of the river current. The coal boats, once laden with their cargo, were lashed together and floated down stream during floods.

Coal during this period was cheap, so much so that the railroads and steamboat lines simply would not haul it (Hunter 1993). The technological turning point for hauling coal on the western rivers came about in the 1850s with the development of a barge that could hold 5,000 bushels of coal and draw two feet of water (Hunter 1993). These barges were moved not by lashing them beside the boat, but instead pushed in front of the steamboat. This new system as it were, would become the dominant form of hauling coal by steamboat. With the new barges, came a newly designed steamboat built especially for this role, the towboat.

The towboat was technologically similar to a packet boat with horizontal boilers and machinery on the main deck, and a shallow draft hull. Where they differed was in their construction. The towboat normally had two decks, the main deck where the engine room, boilers, and equipment were housed, and the upper deck, called a boiler deck that housed the cookhouse, dining room, and berths. The towboat was designed as a stern wheel boat, meaning its paddle wheel pushed the boat through the water. Many packet steamboats at the time were equipped with side wheels along the hull.

The first towboat to operate on the Monongahela River was the *David Crockett*, a stern wheel steamboat of twenty-one tons, built at Green Springs, opposite of Braddock, Pennsylvania. The *David Crockett* was built in 1838 and little description is given of the vessel (Wilkins 1955). Another of the earliest towboats on the Monongahela River was the *Ranger*. Built in 1839 in Pittsburgh, the *Ranger* was a single engine, stern wheel steamboat with one smoke stack and weighed in at thirty-four tons.

Commodities Trade

The packet steamboat companies after the Civil War, paid little attention to the towboat trade. Coal, after all, was not a commodity in which most steamboat companies wanted to invest. The price of coal was simply not worth the cost of shipping after the Civil War. James Veech (1873), a shareholder and a manager of the Monongahela Navigation Company, printed a history of the company and financial tables. From this data a picture of the coal trade from 1844 to 1872 can be constructed.

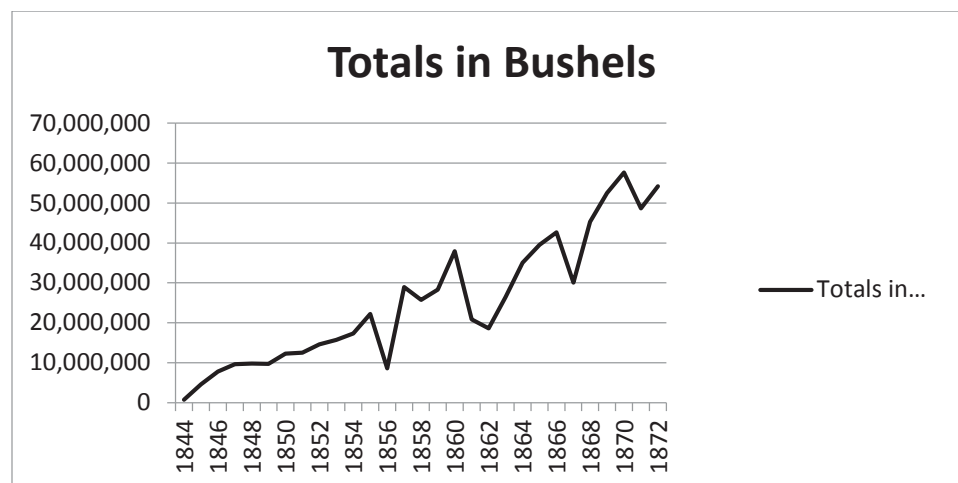


Figure 3. Trend of Coal Bushels passing through Lock Number 1 through Lock Number 5. Reconstructed from *A History of the Monongahela Navigation Company by an Original Stockholder* (Veech 1873).

Figure 3 displays a rapidly increasing coal industry from 1844 to 1872 where 737,931,101 bushels of coal were taken through the five locks on the Monongahela River. Veech (1873) points out that it takes 100,000 bushels of coal to comprise one acre. Within the span of the twenty-eight years of data, 7,379 acres were transported through the locks. From the end of the Civil War in 1865 to year 1872, 370,450,892 bushels, or fifty percent of all coal produced was transported through the locks.

The data in Figure 3 indicates an increase in the amount of coal production in the Monongahela Valley. The missing coal data for Lock Number 5 and the entire missing column for Lock Number 6 show that the areas serviced by these locks (Lock Number 6 was constructed in the 1860s) were not producing coal. The mining infrastructure simply was not yet in place. Brownsville opened its first mine, the Umpire Mine, in 1873 (Ellis 1882).

The expanding towboat industry was soon to take a share of freight service as well. Freight and passenger service were cornered by the packet steamboat lines in the Monongahela Valley. The closing of the Pennsylvania Canal in 1845 routed more goods and services to the Monongahela River. Firms were set up with agents in Brownsville engaged in the commission and forwarding business of this new trade. While it is impossible to separate out packet steamboats from towboats carrying freight in Figure 4, the increase in toll charges and the volatility of the passenger trade in Figure 5 may shed light on the growing role of the towboat in freight transportation.

The increasing freight trade on the Monongahela River from 1844 to 1872 is shown in Figure 4. During the Middle Steamboat Era, freight increases after the Civil War during reconstruction placed heavy competition on the packet steamboats leading

into the 1870s. The volatility of the passenger trade market and stagnant passenger numbers throughout the years following Reconstruction placed a heavy burden on packet lines to secure freight shipments.

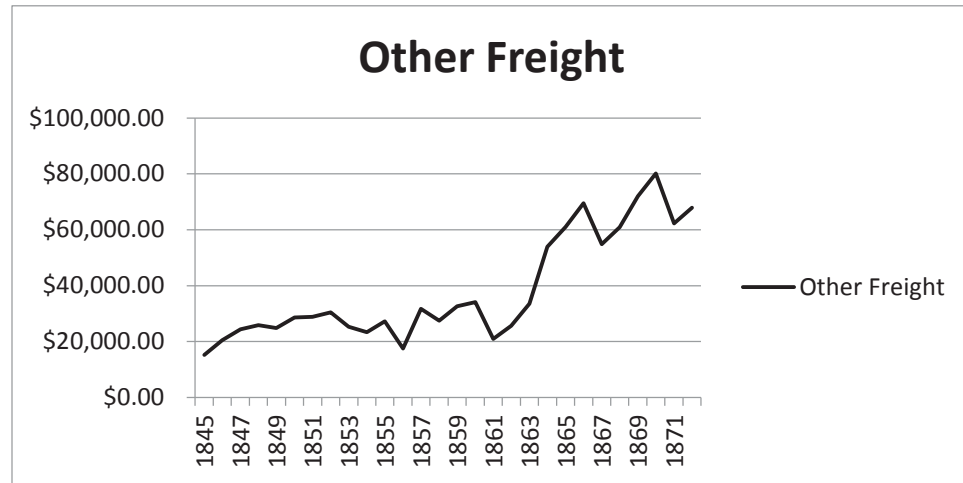


Figure 4. Freight Tolls through Lock Number 1 through Number 5. Reconstructed from *A History of the Monongahela Navigation Company by an Original Stockholder* (Veech 1873).

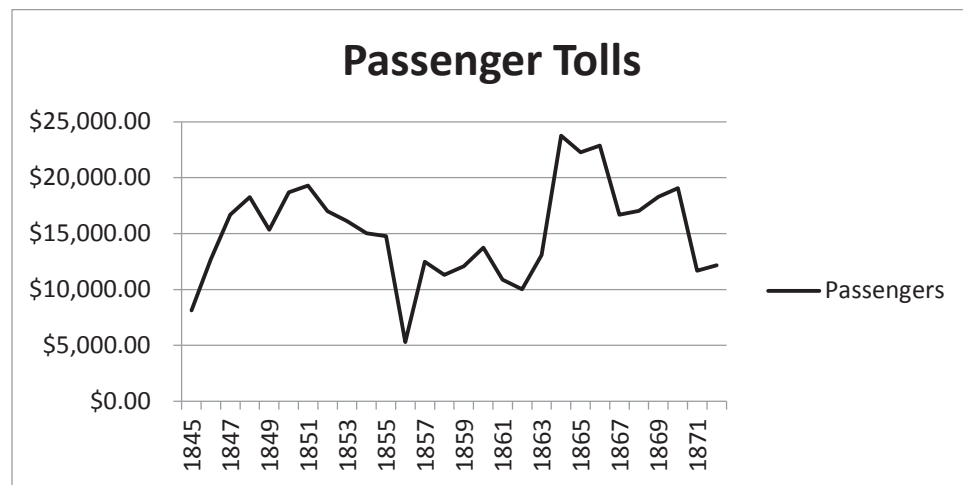


Figure 5. Passenger Tolls through Lock Number 1 through Number 5. Reconstructed from *A History of the Monongahela Navigation Company by an Original Stockholder* (Veech 1873).

The start of the Civil War caused an uneasiness in the commodity markets before the war economy was established. The period after the war, 1866-67, the market dropped in a post-Civil War downturn due to the retirement of greenbacks and the English Panic of 1867 (Glasner and Cooley 1997). A secondary downturn occurs after 1869-1870 where the markets fluctuate again, this time after the Black Friday Panic caused by the scandal of Jay Gould and James Fisk to corner the gold market (Glasner and Cooley 1997). A third notable declines in Figures 3 through 5 include the Panic of 1857 where passenger, coal, and freight bottomed.

The river trade was evolving as steel manufacturing increased in the Monongahela Valley. The evolution of a corporate system that would tie coal mines, steel mills, and the towboat trade to a single business entity was forming. The coal industry until 1880s had prolific small mines located throughout the valley outside of each industrial center. Towns such as Brownsville, Belle Vernon, Elizabeth, and Pittsburgh after the 1870s all had coal mines to feed the many iron foundries lining the river. These mines supplied the many residences with fuel for their stoves and furnaces. These operations were for the most part, small scale, supplying only the towns they were near. Coal was sold at markets and depots in towns for local consumption. Coke was produced locally at the iron foundries in their core ovens and mainly for their own consumption in blast operations.

Coal and coke was distributed in three ways to consumers in later part of the 19th century and into the 20th century. The first distribution method consisted of independent mines selling their coal via contract to large consumers such as railroads, foundries, factories, mills, and power companies (DiCiccio 1996). The second method consisted of

independent mines selling their surplus on the open market to wholesale dealers who then sold to retail dealers. And finally, the third way of distributing coal and coke was internally. Large coal interests such as Pittsburgh Coal or Frick Coal had “captive mines”, mines that were owned and operated by the company, and who owned large holdings in railroads, coke, and steel companies (DiCiccio 1996). This coal never entered the market and was not influenced by the volatility of market prices. Captive mines, such as those owned by Frick, had the greatest worker unrest as they employed the most people and exercised the stringent paternalism over their workers.

The Monongahela Navigation Company during this time was taken over by the federal government and disbanded after the construction of Lock and Dam Number 8 at Dunkard Creek, West Virginia. The River and Harbor Act of July 5th, 1884 disbanded the collection of tolls on inland waterways. An outcry from coal and coke companies, freight dealers, and businessmen, pressured the federal government to take over the assets of the Monongahela Navigation Company (Kussart 1930; Wiley 1937). After a protracted legal battle, and forced condemnation of the Locks and Dams on the river, the Secretary of War acquired the properties and rights of the Monongahela Navigation Company in 1897 after the Supreme Court of the United States affirmed the government’s right to take the property (Kussart 1930; Wiley 1937).

Slackwater improvements continued under federal supervision to construct locks and dams to the headwaters of the Monongahela. Locks and Dams Number 9 through 15 were completed by 1903 in West Virginia. The completed slackwater improvements kept the water level on the Monongahela River at a seven foot navigable depth (Thomas and Watt 1903).

Steel works which owned towboats and mines started coming online with Carnegie Steel, 1875; Jones and Laughlin Steel Company, 1886; Monongahela River Consolidated Coal and Coke, 1889; Crucible Steel, 1900; and US Steel, 1901 (which would become Carnegie-Illinois Steel, 1936). Several barge lines with no holdings to mines or steel mills owned towboats under contract to these major corporations. These corporations included the Dravo Corporation, 1891; American Barge Line, 1915; and Union Barge Line, 1926. This was a transitional period as individual owners gave way to corporate ownership of the boats.

In a preliminary report on the inland waterways commissioned by the U.S. Congress in 1908, it states, “The railroads in many way hinder the development of river traffic. At Pittsburgh and other points on the river, the railroads have gained control of much of the land available for landing and terminal facilities, and have also occupied long stretches of the river banks with railroad tracks” (Congress 1908). President Theodore Roosevelt made this statement at the beginning of the report, “The Commission finds that it was unregulated railroad competition which prevented or destroyed the development of commerce on our inland waterways.” He goes on to point to the Mississippi River as an example where “commerce was driven from the Mississippi by railroads... Throughout the country, railways have secured such control of canals and steamboat lines that day to day inland water transportation is in their hands” (Congress 1908).

However, on the Monongahela River during this time period, the railroad was not the only competition. The commission found that after the creation of Monongahela River Consolidated Coal and Coke Company, no independent coal companies were left.

The company owned a fleet of eighty towboats, about 4,000 coal boats, and barges. The cargo carrying capacity of this fleet was listed by the commission at roughly 2,785,000 total tonnage (Congress 1908). The distribution network of this company with its hubs in Pittsburgh, Cincinnati, Louisville, Evansville, Paducah, Cairo, Memphis, Helena, Vicksburg, Natchez, Baton Rouge, and New Orleans covered all of the major landings on the Ohio and Mississippi rivers. Cargo other than coal was transported by the Monongahela River Consolidated Coal and Coke Company, such as iron and steel, glassware, paving bricks, sugar, molasses, and lumber (Congress 1908). The formation of this company lowered the shipping rates making outside competition unprofitable in the freight industry. The congressional commission (1908) expressed their concern that the United States Steel Corporation signed a contract with Pittsburgh Coal Company that stated all coal supplied through the river trade, be supplied through the Monongahela River Consolidated Coal Company for twenty-five years.

Some of the larger coal companies operating in the Monongahela Valley were American Steel and Wire with two towboats and ninety coal barges supplying mills at Donora, Rankin, and Braddock, Pennsylvania (Congress 1908). The Vesta Coal Company, which supplied Jones and Laughlin Steel Company with coal, controlled a series of tipples at California and Allenport, Pennsylvania. The C. Jutte and Company, affiliated with People's Coal Company transported coal to Pittsburgh, Cincinnati, Louisville and New Orleans (Congress 1908). A. R. Budd Company supplied coal to the lower Mississippi River. The United Coal Company with retail coal outlets throughout the Ohio Valley operated on the Monongahela River.

The incredible expansion of the coal industry and the railroads in the last decades of the 19th century with the rapid rise of the steel industry in Pittsburgh, took its toll on the packet steamboat industry. The frontier, which supplied the necessary trade for passengers and freight, was closed. Industries and manufacturing had grown in areas once supplied by the East, and railroads penetrated deep into the western frontier. With the freight trade taken over by towboats and the rail lines, the packet lines were placed into a mode of attrition especially, after 1870, when railroads penetrated deep into southwestern Pennsylvania from Cumberland to Pittsburgh.

During this Middle Era, workers on the towboats had few options if labor was in dispute. If the coal mines went on strike, then usually the boat crews were furloughed or left waiting on their boats until the strike ended. The congressional report of 1908 found one river association in operation called the Pittsburgh Coal Exchange. This was an organization involved with steamboat interests rather than coal interests (Congress 1908). The commission found that this organization was formally founded in 1891, but had been loosely organized since 1859. The members included packet lines, freight haulers, bulk carriers and most of the steamboat owners in Pittsburgh. The organization's purpose was to be an advocate for the removal of river obstructions, encroachments to navigation, river improvements, and settlement of labor disputes (Congress 1908). However, the Secretary of the Pittsburgh Coal Exchange, Captain J. F. Tilley, was also a member of the Monongahela River Consolidated Coal and Coke Company. It was unlikely that labor was well represented to coal interests.

In 1907, a wage strike occurred between coal mine operators and the mates and deckhands of towboats on the Monongahela River (1907). The mates and deckhands

grievance was over towboats being run without full crews, which was against the law. The local branch of the International Longshoremen, Marine, and Transportation Workers Association called the strike (Kellogg 1914). The wanted a pay increase with mates rising from seventy-five dollars to eighty-five dollars, and deckhands and firemen from fifty dollars to sixty dollars per week (1907). On a boat with two crews, workers labored for six hours on, six hours off, placing the work day at twelve hours. For boats with a single crew on board, the work day was as high as fifteen to eighteen hours (Kellogg 1914). The coal mine operators would wait to see what their fellow operators would do before bowing to the demands of the boat crews. The strike lasted two months and was lost by the workers. The wages of the rivermen were according to their rank and job. These wages were per week and included board. Firemen (striker engineers) and deckhands earned fifty dollars; mates seventy dollars; engineers one hundred dollars; and captains one hundred-twenty-five dollars (Kellogg 1914). A second strike by the marine engineers in 1914 for better wages ended in failure after scab engineers were brought in to take their places.

Captain Joseph Hendrickson, a captain who straddled the emerging line between the captains of the Middle Era, and the new captains of the Late Steamboat Era. Hendrickson was a packet boat pilot/captain for most of the mid-19th century. However he found his position changing. The packet business was sporadic during certain periods of the year and the rapidly growing towboat business operated for most of the year. Hendrickson found himself piloting towboats when the packet business slacked. He worked for most of the year and was a full time riverman.

Joseph Hendrickson was born on April 6, 1822 probably somewhere around West Newton, Pennsylvania. The first steamboat that he served on was the *Jefferson* in 1857. He moved on April 1, 1859 to Brownsville, Pennsylvania where he pursued his work on the river. He has several siblings, but he only mentions Dave and Mell in his diary. He also had one son, George who is engaged in the steamboat business.

Hendrickson was Captain Michael Cox's pilot on the packets *Germania*, *Blaine*, and *I.C. Woodward* (Figure 6). He sometimes made up to twenty-six landings on the *Germania* on the Monongahela River between Pittsburgh and Morgantown, West Virginia. As a pilot, Hendrickson took over for the captain after his watch, serving as captain when Cox was not available. Hendrickson writes about one of his fastest times on the river, "In 1891, trip piloting in thirteen hours and ten minutes and made forty-seven stops along the way".

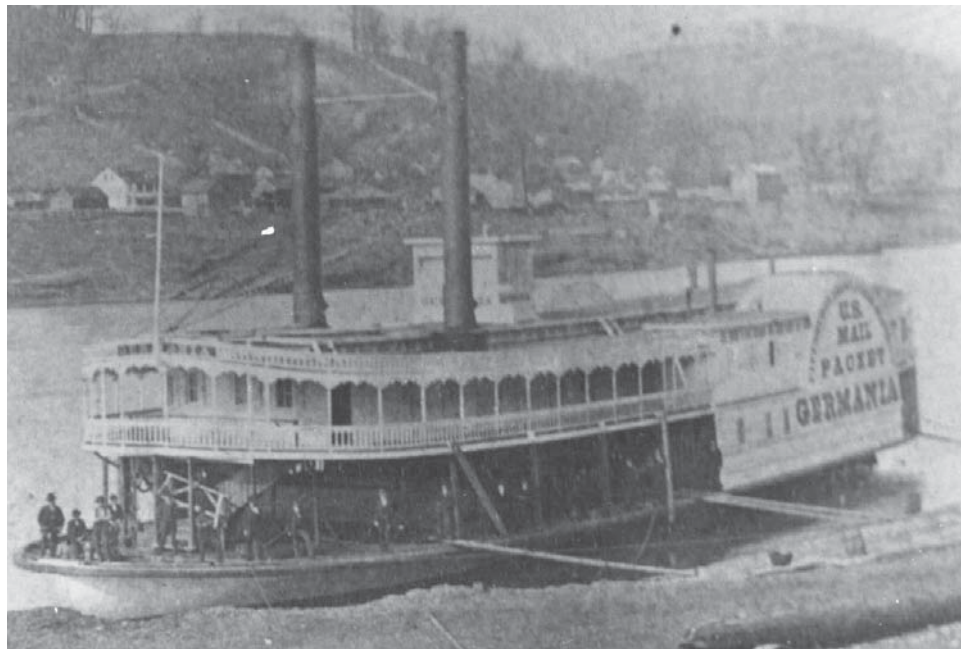


Figure 6. Packet Steamboat *Germania*. Photo Courtesy of California University of Pennsylvania

Captain Hendrickson typifies a Middle Era steamboatman in transition between the packet boats and the towboats. He works the towboats when the packets were down due to ice or low water, or simply because business was slow. His diary covers most of a series of disaster in the 1890s, the grip (influenza pandemic), Panic or Depression of 1893 & 1896, violent strikes at Morewood Mine and Coke Works (1891), and the Homestead Strike (1892).

Hendrickson was an active member of the International Order of the Odd Fellows, and during a period of sickness relied on them for their sick benefits of about twelve dollars a month. While on the river, he made between \$300 to \$500 a year on the river clear. Meals and expenses were taken from his pay before he received it.

He and Cox would often play games of euchre, crokinole, bezique, and chess on their down time. Hendrickson being a Republican and Cox a Democrat probably made those games interesting. His diary reveals an ordinary individual with problems with his teeth (always getting some pulled), ordering hair tonic due to balding, and having trouble sleeping on the boats due to long shifts and back pain. At one point he gets pain pills from his doctor only to take a few and sell the rest to his friends.

Hendrickson would have undoubtedly identified as a riverman and would talk about his worker identity with ease. He was always going to the boatyard, inspecting repairs, and talking to the carpenters or mechanics. He would go to the boat on his off days to make sure things were in order, even going as far as helping an engineer replace the fire grates and flues on a boiler. Michael Cox probably would have balked at the idea, not because of ignorance, but because of his status as a wealthy merchant and boat owner.

Hendricks becomes ill in 1894, the *McKeesport Daily News* in 1894 proclaims Joseph Hendrickson's retirement from the river. The article was premature as Hendrickson returned to the river in 1897 after battling a long illness that he never names. Joseph has a sense of duty and work ethic on the boats, on March 10, 1898 he writes, "Harry Donaldson on boat last night. Was to go on boat but got drunk and made an exhibition of himself, had a great time." Then March 25, 1898, "Went to Custom House about Harry Donaldson drinking...Harry Donaldson's license suspended for 30 days."

Hendrickson made the river his life, he spent the hours he could working on it, to support a family. He had a small three story house on Cass Street in Brownsville, built on a hill with two lots. He subsidized his family's nutrition by planting a garden, canning, and making wine from a grape arbor he tended when he could. He used his social capital on one occasion, "December 5, 1894. Made a dicker with Beatty for 100 bushels of coal in trade for an old suit of George H's clothes." Joseph son represented the hereditary nature of work on the steamboats. George worked on several boats in the Midwest. Captain Hendrickson's diary reveals how his identity was in transition between the Middle and Late Steamboat eras. He makes the comment early on that only fools would buy stock in the packets.

The captain of a towboat gave up a part of his authority for a steady pay check. In an interview in 1957, Dick Tweddell gives a description of the towboat captain during the Middle Steamboat Era:

Well there were captains on the Monongahela. I knew two of them. One remotely, that was Captain H___ and the other lived near us, C___. They seemed to have the same status as a general foreman or superintendent of a

steel mill. ...You very rarely saw the river captain because he was on the river.

That was considered a fine way to make a living because he was always taken care of and his salary was always with his family. He had his home, he had his meals provided by whatever coal or steel company he was navigating for (Twedell 1957).

Twedell then continues to give a description of the crew, one that sounds familiar from the earliest period. "...the riverman was an awful low form of... He did that because he couldn't get a respectable job... The lower ones were shifty sort of people. They were apt to quit this thing and do something else. The thing you remembered about the rivermen was they drank" (Twedell 1957).

Oral histories recorded by John Knoepfle in 1957 and now a part of the University of Illinois at Springfield's *Steamboats and Inland River* collection, add insight into worker identity formation during the Middle Steamboat Era. These interviews were taken as part of a series by the Public Library at Cincinnati and Sagamon State University in Illinois. While these interviews were not part of a labor history study, they do touch on the how the interviewees see themselves.

Captain Bernard Savage and Noval Horton indicate a long hereditary line of river workers in their families. Their fathers, grandfather, and uncles, all were instrumental in their careers on the river (Brasher 1957; Horton 1957). During the interviews of those men who worked during the Middle Steamboat Era, many had started their life on the river when they were sixteen or seventeen years of age. Brasher started when he was only nine by swabbing the decks. These men had a long history of family working on the

rivers and were exposed to it at a young age. This type of hereditary of work, extended far back into the Early Steamboat Period. Worker identity, reinforced through the hereditary nature of working on the boats, was important, due in part because the work was often in an apprentice-master relationship. Worker identity was formed in the home where fathers, uncles, and cousins, shared their experiences and helped shape the river communities they lived in.

The workers during the Middle Steamboat Era were in transition. Those who worked on the packets found themselves without work or at the very best sporadic work on the river. The towboats on the other hand were increasing in number. Their crews represented a new class of industrial worker on the river tied to the extractive business of coal mining. Their work depended on the mine work and when a mine went on strike the boats were tied up. Hendrickson documented several strikes, the 1891 Morewood Mine Massacre, 1894 coal and coke field strikes, and strikes in 1896 and 1897 (Hendrickson 1957).

The Middle Steamboat Era ended with a new rise in labor disputed between big coal and the riverworkers. Tensions would remain high playing themselves out during the Late Steamboat Era as unions try to penetrate into river labor. The Middle Steamboat Era was about the rise of coal and corporate consolidation of the steamboat fleets. The Late Steamboat Era would be about workers and organized labor.

The Archaeology of the Captain James Gormley and Captain Michael Cox Houses.

Nineteenth century society in the Monongahela Valley was comprised of people divided along a multiplicity of social lines including those of class, race, gender, occupation, and wealth. In order to explore these various socioeconomic variables, archaeologists have relied on techniques involving a variety of scales from landscape studies to domestic sites. The focus of historical archaeology has gravitated toward the household as a unit of measure for trends in consumerism, class status, gender roles, and societal participation by the members of the family. Subsurface features such as refuse pits, cellars, wells, privy holes, and builder's trenches offer historical archaeologists a window into the various contexts of household life and activity areas throughout the life of the site. Architectural features such as building materials, foundations, and spatial relationships of structures on a house lot can offer insight into various social patterns such as wealth or social ranking. The very position of the house on the landscape can indicate relative class status or social prominence in the community.

Few archaeologists have taken up the challenge of exploring the steamboat industry as a research focus, and fewer the steamboat worker. Several studies examining the material culture of steamboat passengers, wrecks, and the excavations of whole steamboats are fairly limited (Corbin 1997, 1998, 2000; Hawley and Arabia Steamboat Museum. 1998; Petsche 1974; Switzer 1974). Within the context of the industry as a whole, steamboat workers and their lives along the river have largely been forgotten. The realm of regional industrial archaeology has focused largely on miners and their lives

within patch towns under the thumb of paternalistic companies. The steamboat worker in contrast lived weeks on end under the paternalistic gaze of the captain. They toiled under the control of the mate acting as their foreman only to return home for brief periods before having to leave again. What would the archaeological remains look like in one of these workers homes? What material culture would be left behind? Could their class status be determined in the archaeological record? As mentioned previously, many of those who worked on the boats were transient in nature. Many rented their homes or stayed with family until moving on to where the work was located. This highly mobile workforce presented a problem when choosing an archaeological domestic site to excavate. The focus had to shift from the everyday crew members, to the captains who had settled in a more permanent fashion in the town.

This analysis focuses on the excavations of Captain James Gormley and Captain Michael Cox houses, located in Brownsville, Pennsylvania. The two captain's households fall into two different eras of the steamboat industry. Captain Gormley and his household peaked during the Early Steamboat Era (1811-1865) whereas Michael Cox capitalized on the Middle Steamboat Era's (1866-1918) evolving corporate structure. Both households represent a window into the past and the opportunity to examine the everyday life of the captains and their families.

Field and Laboratory Methods

House sites offered a window into social organization at the individual family level and the ability to understand aspects of the everyday life of the occupants. In the 1970s, Stanly South developed a methodology for uncovering 18th century depositional

pattering of colonial homesteads by trash pit location on the sites. His utilization of artifacts and their deposited locations to reveal interaction zones within a site gave historical archaeologists a tool for understanding the relationship of different areas of household sites. Not only did South organize his materials based along lines of usage, but he developed a relative dating system using ceramic artifacts as a guide for delineating occupation dates of a site. Later historical archaeologists would combine historical documentation, oral histories, contextual relationships, site formation process, and site structure for their base analysis method (Beaudry 1999).

Site Selection Criteria

During the spring of 2011, research began with the objective of locating two 19th century house lots in Brownsville for archaeological excavation. The selection criteria were 1) that the sites had to formally been the residence of a steamboat worker and their family; 2) that the dwelling was no longer present; and 3) that the worker or workers represented at least two of the different time periods during the steamboat industry's development in the Monongahela Valley. The locational strategy used census data, deed research, period maps, and town directories.

Three immediate problems emerged while trying to locate two potential house lots. The first problem was with the census data itself. Addresses were not applied to the census records until after 1900. The second problem was the transient nature of the steamboat and its workers many of whom rented property for only a few years. Their names were listed as renters and because they did not own the property, many lived in their apartments for only a few years. The third problem occurred in the form of new

construction atop the archaeological remains on a few of the potential sites. Due to these problems the methodology for the archaeological investigations were shifted from deckhands on the boats to the captains. The captains, due to their class status and higher wage earnings, made them more visible on the cultural and economic landscape of the town as they integrated themselves into everyday politics and businesses. Some of the captain's homes were presently residences while others had fallen victim to wrecking crews.

This shift in focus resulted in the identification of two potential properties, Captain James Gormley's and Captain Michael Cox's residences. Several research questions that were asked before excavation. Could the archaeological excavations of two steamboat captain's houses reveal how their worker identity was shaped in the community? Could their domestic artifacts assemblages reveal the transition in the steamboat industry from a foundation in the frontier economy to a corporate structure rooted in industrial capitalism?

Field Methodology

In the summer of 2011, I partnered with various local universities and nonprofits to execute the excavation plan. The Gormley House was on property under the management of the Brownsville Area Revitalization Corporation (BARC) and the Cox House was owned by a private individual. Due to the large scale of both projects, it was decided to use volunteers from the Society for Pennsylvania Archaeology Mon/Yough Chapter #3 and Nemaquin Archaeological Services as a supplier of field equipment. The chapter is comprised of both amateur and professional archaeologists who record and

excavate sites in order to further expand the knowledge of Pennsylvania's past. The number of volunteers from the chapter ranged from six to eight who would come out for a day or two and help in the excavations.

With the help of both students and the Mon/Yough Chapter, we allowed the public to have access to the sites, and various organizations were able to volunteer in the excavations. We decided to call the event Brownsville Archaeology Month. I developed a partnership with the Market Street Arts Academy, a nonprofit organization dedicated regional cultural and economic redevelopment to use their yearly arts festival to increase traffic to our sites and to educate people from outside of the region.

We partnered with Boy Scout Troop 650 from Brownsville who used their excavation experience to earn their Archaeology Badge (Figure 7). Each member prepared a presentation on the excavation regional history to earn their badges. Daisy Troop 51063 from Brownsville included girls from six to nine years old. For the young children of the Daisy Troop, we provided a mock excavation so they could experience archaeology first hand, as well as a presentation at the local free library.



Figure 7. Boy Scouts at the Gormley House Site.

I approached California University of Pennsylvania and West Virginia University to have their field schools on the sites for the 2011 summer field season in which they agreed. The number of students actively excavating from both schools was around twenty-five with ten on the Gormley House and fifteen at the Cox House (Figure 8). Most students stayed the full eight hour day, but part time students could either work the mornings or afternoons.



Figure 8. California University 2011 Field School at the Cox House Site.

Brownsville Archaeology Month concluded with a presentation at the Brownsville Free Public Library detailing the findings of the excavations. The public was invited to listen and ask questions. Artifacts, both historic and prehistoric were on display for the public to handle and discuss. After the initial four weeks that encompassed Brownsville Archaeology Month, the excavations continued for another four weeks.

The first objective of the excavations was to locate any intact subsurface structural remains of the houses. Features such as foundation walls, builder's trenches, or cellars were of particular interest as they could be used to document the size and position of the houses. Artifacts recovered from these areas might also lead to insights about the material types used in the construction of the houses and relative dates when the houses were occupied. The second objective was to recover artifacts that would lend insight into the functional living areas (Kitchen, Dining, Parlor, etc.) within the houses.

To achieve these objectives, the following field methodology was employed. Prior to any excavation, a datum point was established for each site so that a grid could be established for spatial control. The grid was measured in engineering scale that consisted of a series of four foot by four foot excavation units plotted across the sites. The primary datum was designated N100 E100 in order to allow for freedom to move across the site without encountering negative square coordinates. The grid base line was oriented following Bank Street on a northwest orientation. All mapping was oriented to a grid north in order to keep consistent unit coordinate designations.

Excavation unit sub-datums were placed in the southwest corners at six inches above ground surface. Stratigraphic control was established by excavating all units in half foot levels. Excavated material was shoveled into ten gallon buckets and taken to areas designated for screening away from the excavation area. All excavated soil was screened through quarter inch hardware mesh onto spoil piles that were then used to backfill the site. The Gormley House had approximately 5,184 cubic feet of soil excavated and the Cox House had 2,688 cubic feet of soil removed.

Cultural features that were encountered during excavation were given numeric designations in the order of their discovery. Soil strata were labeled according to proper geomorphological horizon levels such as O, A, and B. Soil texture, friability, compaction, visual composition, and Munsell colors were recorded (Munsell Color (Firm) 1992).

Artifacts that were moveable were placed into bags with unit number, level, date, and excavators labels by provenience. Completed units were photographed with a photo board detailing the relative provenience and directional arrow. All units had plan views drawn and where applicable, wall profiles.

The field methodology for the excavation of the Captain James Gormley and Captain Michael Cox houses followed the same data recovery guidelines as established by the Pennsylvania Historical and Museum Commission for conducting Phase III site mitigations. Techniques for excavation included establishing a site grid, hand excavation of naturally occurring soil strata, screening the soil through quarter inch mesh to determine artifact densities, and feature excavation. All located features were mapped and excavated.

Analysis Methodology

Analyses of recovered artifacts from the house excavations were processed using a modified version of Stanley South's (2002) approach to analyzing material culture. I use his classifications to explore the functional analysis of the house sites and for establishing a site use chronology. However, I reversed his classification scheme to allow the analysis to proceed in a scalar fashion. Starting with the widest category, the Group, it then narrows to Artifact Material, then Artifact Class, to Artifact Type, and finally to the smallest scale, the Description. Reversing South's classification groups from largest to smallest, allowed quicker data processing of sub categories.

I use many of South's classifications starting first at the Group level; these included Agriculture, Architecture, Arms Related, Domestic, Fuel Related, Hardware, Miscellaneous, and Personal. The second classification was the Artifact Material, such as glass, ceramic, metal, wood, etc. The third grouping was the Artifact Class level that focused on the various material wares such as stoneware, earthenware, pearlwares, and etc. The fourth level was the Artifact Type. This level was specific in categorizing the

artifact into tableware, glassware, silverware, toys, etc. The final level was the Description, where the artifact's defining features were recorded such as maker's marks and manufacturing dates. These classifications helped to identify activity areas within the houses and surrounding yards.

South's secondary objective in his creation of a functional analysis of artifacts was to create a method of dating based on the manufacturing dates of ceramic artifacts. I use South's mean ceramic dating to isolate the occupation under study, but I also use a variety of material dating such as nail and bottle dating to increase the accuracy of the mean dates.

Finally, South's methodology was developed to understand depositional patterns of refuse to identify colonial and frontier settlements. This type of pattern identification is not useful to me. Documentary research collaborated the occupational time periods for both dwellings placing them both in the mid-19th century. South's pattern recognition within the houses was used to identify, at least with the Gormley House, interaction zones such as kitchen and dining areas. The Cox House's recent depositional event did not allow for the exploration within the structure as large portions of beams and wall framing filled the basement area.

I employ a mutualistic perspective on the archaeological sites and the materials that were excavated. Captain James Gormley and Captain Michael Cox existed within a larger network of institutions, relationships, social, and personal relationships that often cannot be found in the archaeological record. By placing them with their perspective steamboat eras, a multi-scalar study was created detailing various interaction within the community and the larger region. By using a mutualistic perspective, their working class

identities emerge through their interactions within their larger social networks.

Problems and Concerns

Archaeological field survey methodology has inherent challenges built into the very nature of the excavation process. During the initial excavations at both the Gormley and Cox houses, methodological concerns were immediate. Some were based on site exposure within the community, and others were weather related. Depositional differences between the two sites altered the survey methodology.

The Gormley House (Figure 9) was positioned within a densely vegetated lot, mid center on a hillside. Rain often caused problems with units flooding and creating mud. Site vandals stole the baseline survey markers which took hours to fix and members of the general public often walked over the site after the hours of excavation creating security problems.

The Cox House (Figure 10) presented its own problematic excavation. The house was demolished around 2005 when the owner could no longer maintain it. The walls, roof, and all interior material was bulldozed into the cellar foundation. Upon excavation, it was impossible to excavate into the house interior as the debris had not gone through the process of decay. This limited the excavation to the front exterior portion of the foundation. The rear of the house once had a large garage that sat upon a cement pad. This cement covered much of the area in the rear of the house allowing only limited excavation to occur.

Concerns over the use of Stanley South's mean ceramic dating processes are well documented. Artifact assemblage size, artifact identification in order to establish a

manufacturing date, and the long term use of certain ceramics such as by the poor or those who kept antiques will skew the dating process. I mitigated these ambiguities by also including dates of nails and certain bottle types. I was not interested in formulating an exact date, I had census and deed records to show the occupation of the house. I was interested in separating out cultural materials from older and younger deposits that developed over the site formation process. This became critical at the Cox House as the occupation extended into the 21st century.

The excavations at the Gormley and Cox houses provided an opportunity to involve community organizations and stakeholders to engage in the discovery of their local history. This was the first time a project of this nature was executed in Brownsville with well over a hundred visitors visiting the site over the eight weeks of excavating. The construction of a well thought archaeological survey plan incorporating artifact analysis and interpretation formed the baseline for the two house excavations. Standardizing the methodology, even though the physical settings were unique, allowed for a more consistent analysis of the materials by volunteers and professionals alike.

Captain James Gormley House

Captain James Gormley left little trace of his life on the landscape of Brownsville. There are few records outside of his name on census surveys, on a map, a his name here and there on listings of steamboat captains in the Monongahela Valley at the beginning of the research. The little that was written opened the door to a complex individual living in a difficult time during our nation's history.

James Gormley appears in the 1850 census in Brownsville at the age of thirty-

three. He may have come to Brownsville earlier, but this is the first account that places him in Brownsville. His occupation was listed as steamboat captain and he was originally from Greene County, Pennsylvania located not far from Brownsville (1850 United States Federal Census 1850). The census also lists James' wife Sarah Flemming Gormley, age 31, and their children: Francis (age 18), John (age 10), Henry (age 7), Neal (age 5), and Charles (age 2). His value of real estate owned was \$1500 in 1850.

There were ten non relatives living in the Gormley home. These individuals were African-American and not listed as servants in the Gormley household. Jane Rhodes (age 22) and Olive Fuller (age 23) were not listed as having an occupation. Other names were as follows: Margaret Fairfax (age 53), Emily Fairfax (age 23), Owen Fairfax (age 17), Caroline Fairfax (age 16), and James Fairfax (age 14) of New York. Mary Plummer (age 9), John Plummer (age 7), and Fenten Plummer (age 38) are listed as from Fayette County, Pennsylvania. Owen Fairfax and Fenten Plummer were registered as "Laborers" on the 1850 census (1850 United States Federal Census 1850). The question is, who were these African-Americans living in the Gormley household?

The 1860 census reveals James (age 43), Sarah (age 41), Francis (age 21), John (age 19), Henry (age 17), Neil (age 15), Charles (age 12) Sallie (age 10), William (age 7), James (age 3), and Nellie (age 3) living in the household (1860 United States Federal Census 1860). A Mary Galatin was listed as a 14 year old black female whose occupation was sewing was also living in the household. Three of James' children were listed as working in the steamboat industry. Francis was a boat laborer, John was a pilot apprentice, and Henry was an engineer apprentice.

In the Directory of the Monongahela and Youghiogeny Valleys, Gormley was

listed as the captain of the packet steamboat the *Statesman* in 1851 and the *Jesse R. Bell* in 1859 (Thurston 1859). The *Statesmen* was used in the Cincinnati trade and the *Jesse R. Bell* was used in the Pittsburgh/St. Louis area trade. Gormley was among other things, an entrepreneur as well, investing in steamboats himself. He owned shares of various boats in the Pittsburgh and the St. Louis area. James Gormley had the steamboat *A. B. Chambers* built in 1855 (Corbin 2000; Ingalls 1916). Named after one of the original owners of the *Daily Missouri Republican*, the sidewheeled steamboat was built for the Missouri trade but was used in the Cincinnati area instead (Corbin 2000). After hitting a snag and sinking, the *A. B. Chambers* was raised and piloted by Samuel Clemens (Mark Twain) in 1858 to 1859 (Corbin 2000). After he captained the *A. B. Chambers*, Gormley was listed as the captain of the *Sultan* in April of 1855 (1855).

Sometime after 1860, the Gormley family moved to Saint Louis where James became involved in the Civil War as a steamboat captain. An article referencing him was published in the *Missouri Republican* in 1862:

On Tuesday, the 4th instant, the steamer *Empress* left St. Louis, having on board some 700 tons Commissary stores for Cairo and Paducah, 150 head of cattle for Fort Henry and Col. Bissell's Engineer Regiment, destined for Gen. Pope's Division at Commerce, Mo.; Wednesday landed the troops at Commerce and Commissary stores at Cairo, coaled and arrived at Paducah on Thursday morning, received on board the Forty-eighth Ohio Infantry, Col. Sullivan commanding, coaled and arrived at Fort Henry Friday morning, being the first arrival for the new expedition; the water had almost completely inundated the Fort; no landing there; proceeded up the

river about seven miles; landed in the brush, alongside the *Gladiator*, Gen. McClennand's headquarters, received a present from Lieut. Col. Parker, of the Forty-eighth, of a splendid American eagle, whose perch is now on the pilot house of the *Empress*. Here, on Saturday, the 8th, commenced a new phase in steamboating--the *Empress* is converted into a slaughter house to supply the much needed beef to the army, but "some things can be done as well as others," and there is room on the *Empress* to do almost anything, and Captain Jas. Gormley and his crew are the men to put things through (1862b).

The *Empress* was then converted from a butcher boat to a floating hospital complete with surgeons. Gormley's exploits were documented in the article as the steamboat captain and his first mate built a pontoon bridge out of yawls to rescue trapped troops during high water. He received recognition from General Sherman due to this event. James was also credited with capturing a Confederate soldier who inadvertently got lost behind union lines.

Gormley takes leave of the boat shortly after arriving at Pittsburgh Landing on March 28th, 1862 to pilot the *Istan* on the Tennessee River (1862c). The Battle of Pittsburgh Landing (Shiloh) took place in April of that year. The *Empress* continued to ferry wounded from the battle to landings along the Tennessee River.

Two years before James Gormley's death, the *Sacramento Daily Union* (1871) reports briefly on a verdict in a Staten Island ferryboat explosion in New York. "James Gormley, an old St. Louis steamboat captain testified that the boiler 'was dilapidated around the rivet heads at the bow end' and 'had become weak due from age' (1871) . The

ferry boat *Westfield* had exploded killing 125 of the more than 200 passengers on board. The commission found that the operators were using well above the inspector's rating for steam pressure and Gormley's testimony proved with the over pressurization in a neglected and old boiler, the disaster was sure to happen.

James Gormley died on January 29th, 1873 of a condition called Variola, caused by the smallpox virus. He was fifty-four years old at the time of death. In that year, a smallpox epidemic raced through St. Louis killing hundreds, if not thousands. Gormley's wife Sarah and son Charles continued to live in St. Louis until her death in 1889 and Charles' death in 1910.

Site Setting

The Gormley House was positioned on the left side of Bank Street in Bridgeport (South Brownsville) on a small rise overlooking the Monongahela and Dunlap's Creek. The house would have had a commanding view of the river and wharf where steamboats would load and unload their cargo. Given Gormley's schedule both in the Pittsburgh area and the Cincinnati/St. Louis area, he was probably home very little.

The condition of the empty lot where the Gormley family lived, situated between Bank Street and Shady Avenue, was over grown with trash and litter interspersed (Figure 9). The house that once stood in the next lot was pulled down by the Brownsville Borough, and remains from it encroached onto the Gormley parcel. The entire site was covered in a thick vine and scrub brush ground cover with young locust trees interspersed.



Figure 9. Gormley House Site.

The deed to the property raises interesting questions regarding property ownership of the land and house (1862a). Located on an 1856 map of Brownsville, “Captain Gormley Residence” is clearly marked on the property (Griffith 1856). The 1850 census places the Gormley family in Bridgeport during this time period. No other property is listed as theirs. However, the property did not belong to Captain James Gormley. The property belonged to John A. Gormly, his wife Louisa, and a Nancy J. Fullerton of Crawford County, Ohio. The property was willed to John A. Gormly and an Alfina Thorton by the estate of Mary Webley in 1833. This deed which was dated 1862 was for the transfer of the property to Judge Thomas Duncan who bought this property and others along Bank Street. He would later build his own home in the adjacent lot to the Gormly property.

Who were John A. and Louis B. Gormly and how were they related to James and Sarah Gormley? John A. Gormly was a Brownsville resident until the 1840s and an

active member of the Presbyterian Church. He married Louisa Bowman, daughter of a hat maker and merchant whose family had a long pedigree in Brownsville stretching back into the 1790s. The Bowmans were a prominent family of merchants, traders, and steamboat builders. They were also staunch abolitionists and participated in the Underground Railroad making Brownsville a key stop along the river.

John A. and Louisa Gormly move to Bucyrus, Ohio, where John became the president of the local bank. He invested in inland shipping, notably steamboats and Great Lakes boats. He is mentioned in the *Daily Missouri Republican* on a few occasions representing the interests of his bank in the St. Louis area.

Questions remain on how Gormly and Gormley are related. Genealogical research yielded no clues about a possible connection. Unfortunately there were no data regarding who James Gormley's parents were so it is possible John A. could be an uncle or cousin. John A. Gormly was born in 1803 where James Gormley was born in 1819. The spellings of the name were also of little consequence as some records spell Gormley with an "e" and some do not. It was more likely that James Gormley rented the property for the time his family was in Brownsville while he was away establishing himself in St. Louis.

Excavation at the Gormley House

Stratigraphic control was established by excavating all units in six inch levels. Many units did not go past one level before sterile subsoil was encountered, although the deepest unit went to level 5.

The excavation area was broken into two areas, Excavation Block A and Excavation Block B. Excavation Block A was the area of the main house and focus of the

study. This area contained twenty-three, four by four foot excavation units (Figure 10). Excavation Block B was used to test the back area of the house for activity areas such as privies, outbuildings, etc. The four excavation units were arranged in an inverted L pattern with unit N116 E128 only four feet from Excavation Block A.

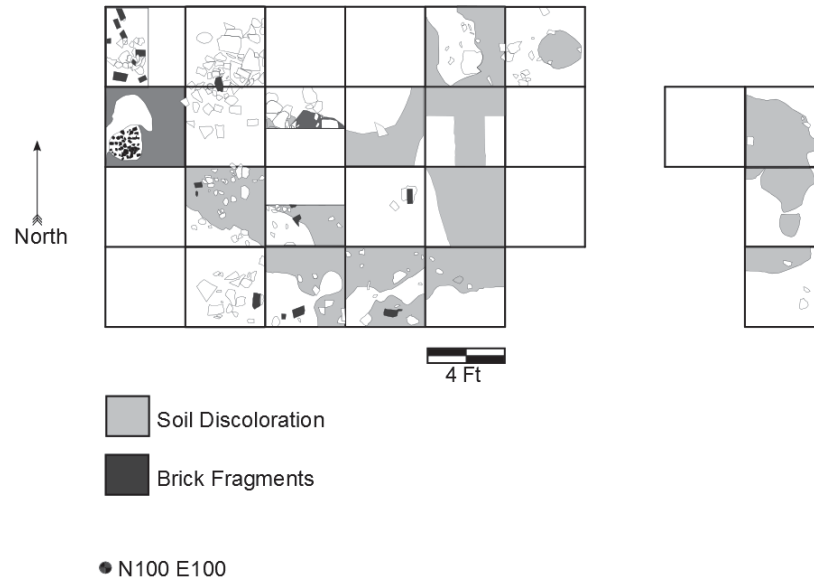


Figure 10. Base Map of the Gormley House Site.

Feature Excavation

Features encountered after the removal of the topsoil were photographed, mapped, and then excavated in six inch levels. All feature matrices were screened through quarter inch mesh and all artifacts were bagged according to unit, feature, and level. After excavation, features were mapped and photographed. It is important to note that not all features present within a historical archaeological context are excavatable, as many features are simply architectural remains of the house alluding to its construction.

Feature 1

Feature 1 is a concentration of coal found in unit N120 E104. It was part of a larger coal pile extending into N120 E100. This feature was encountered at Level 2 or one foot in depth in the northwest corner of the site. This feature was interpreted as the coal bin or coal storage area. Artifacts recovered from this area are numerous but those relating to its interpretation include a recovered shovel shank, forged door hinges, fragments of a pail or bucket, drainpipe fragments, various iron pipe and iron concretions. This area could also have been the entrance to cellar area where food could be stored in a cool dry environment. Several pieces of salt glazed stoneware crockery fragments were recovered.

Feature 2

Extending through units N116-120 E104 was a concentration of rough cut foundation stones. These stones were not in their original positions and extended less than one foot below surface (Figure 11). These foundation stones indicated that the house had a dry laid stone foundation, like many of the houses in Brownsville built in the 1830s. This pile of disarticulated foundation stone may represent when the house was torn down and the stone used for other purposes.



Figure 11. Photo detailing foundation stones of Feature 2.

Feature 3

In unit N116 E116 at level 2 a linear stain in the shape of a “T” was encountered. It was 1.5’ in width and 4 feet long. This stain was possibly a builder’s trench indicating a rear wall of the house. After careful excavation, no artifacts were recovered from within the shallow .5’ stain.

Feature 4

Feature 4 was the dark 10yr 2/1 black soil encompassing a semi-circular area around the excavation units and throughout the interior of the site. This soil was at its shallowest at the N108 line and at its deepest at the N120 transect. This dark soil may represent a shallow cellar or crawl space extending under the house.

Feature 5

Feature 5 was a single brick with a concrete footing found in situ located in unit N112 E112. This singular brick was upright with its long axis pointing in a north to south

direction. The brick and its footing was probably used as a floor joist support with a beam running from the front of the house facing Bank Street to the rear of the house facing Shady Ave.

Feature 6

Feature 6 was another brick with a concrete footer located in N108 E112. This brick was toppled over with its long axis pointed in a northwest to southeast direction. Again this brick was probably used as a floor joist.

Feature 7

Feature 7 was a burned circular pit located in unit N120 E120. Within the pit were various pieces of whiteware, pearlware, a creamware fragment, and nails. The diameter of the pit was 2.2' by 2'.

Feature 8

Feature 8 was located in Excavation Block B in N108-116 E132. This shallow stain may indicate an out building or back of house activity area. No artifacts were recovered from this area.

Summary of Recovered Artifacts

A total of 3909 artifacts was recovered from the Gormley House Site during the 2011 field season (Table 1). The most numerous category of artifacts was domestic, (n=2527); this category was made up of bone, ceramic, cloth, glass, metal, metal/ceramic, and shell. Within the domestic category glass prevailed as the largest material category, (n=1775) which consisted largely of bottles. The second largest domestic material category was ceramics, (n=705) which was made up of creamware, earthenware, flow

blow, ironstone, pearlware, porcelain, redware, spongeware, stoneware, terra cotta, transferware, vessel, vitreous china, and whiteware.

Architecture made up the next largest artifact category, (n=1115) this category consisted of cement, glass, stone, metal, ceramic and terra cotta. Some of the artifacts recovered in this category include: windows, shingles, nails, and drainpipes. The most plentiful material in this artifact category was glass, (n=544), which was followed by metal, (n=496).

Following architecture was the personal artifact category, (n=98), which was comprised of the materials metal, glass, ceramic and stone. This category included things such as marbles, jewelry, coins and buttons. Of the materials in this category, ceramic was the most plentiful, (n=44). The next most plentiful material in this artifact category was glass, (n=29).

The next category of artifacts was miscellaneous, (n=86), which was comprised of metal, glass, bone, shell, carbon, plastic, stone, textile, ceramic and other unidentified materials. The artifacts in this category were mostly fragmented. The most numerous material in this artifact category was glass, (n=50).

Hardware, (n=64) was the next most numerous category that was made up of mostly metal materials. Artifacts such as hinges and hooks were included in this category. The material metal, (n=60) was the most plentiful in this category.

The last three artifact categories were fuel, (n=15), arms, (n=2), and agriculture, (n=2). The fuel category consisted of some lumps of coal, coke used as fuel, and clinkers. The two artifacts recovered in the arms category were fragments from a shotgun shell base and a 22-caliber "short" cartridge case. Fragments of a horseshoe and a triangular

fragment of bridle where the only artifacts recovered from the agricultural category.

Table 1. Artifact Frequencies Gormley House

		<u>Gormley House Site</u>	
Artifact class Number & Description		Count	%
<i>Domestic Group</i>			
1.	Bone	23	.58
2.	Ceramic	705	17.03
3.	Cloth	3	.07
4.	Glass	1775	44.40
5.	Metal	19	.48
6.	Metal/Ceramic	1	.02
7.	Shell	1	.02
<i>Total Domestic</i>		2527	64.70
<i>Architecture Group</i>			
1.	Cement	2	.05
2.	Glass	544	13.91
3.	Metal	496	12.68
4.	Ceramic	60	01.53
5.	Stone	12	.30
6.	Terra Cotta	1	.02
<i>Total Architecture</i>		1115	28.49
<i>Personal Group</i>			
1.	Ceramics	44	01.12
2.	Glass	29	.74
3.	Metal	24	.61
4.	Stone	1	.02
<i>Total Personal</i>		98	2.49
<i>Miscellaneous Group</i>			
1.	Glass	50	1.27
2.	Metal	19	.48
3.	Shell	3	.07
4.	Carbon	1	.02
5.	Plastic	2	.05
6.	Stone	3	.07
7.	Textile	1	.02
8.	Ceramic	3	.07
9.	Unidentified	2	.05
10.	Bone	2	.05
<i>Total Miscellaneous</i>		86	2.15

Table 1. Continuation of Artifact Frequencies Gormley House

<i>Hardware Group</i>			
1.	Metal	60	1.53
2.	Ceramic	3	.07
3.	Plastic	1	.02
	<i>Total Hardware</i>	64	1.63
<hr/>			
<i>Fuel Group</i>			
1.	Coal	4	.10
2.	Coke	1	.02
3.	Unidentified	10	.25
	<i>Total Fuel</i>	15	.38
<hr/>			
<i>Arms Group</i>			
1.	Metal	2	.05
	<i>Total Arms</i>	2	.05
<hr/>			
<i>Agriculture Group</i>			
1.	Metal	2	.05
	<i>Total Agriculture</i>	2	.05
<hr/>			
TOTAL		3909	100.00
<hr/>			

Notable Artifacts

The Gormley House yielded several notable artifacts that gave some insight into Captain Gormley and his family. One artifact, was a piece of a tan clay pipe stem that matched the stems from several styles of Scottish or Irish pipes popular in the 1850s (Figure 12). The second artifact was a Sheffield folding pocket knife, the name “SHEFFIELD” stamped into its blade (Figure 13). These particular folding knives were becoming popular in the mid-19th century. Another important artifact, a doll’s head fragment may give insight into the children at the Gormley House. A fine porcelain doll face was recovered that was manufactured in the 1860s and was possibly played with by Sallie who was ten years old at the time.

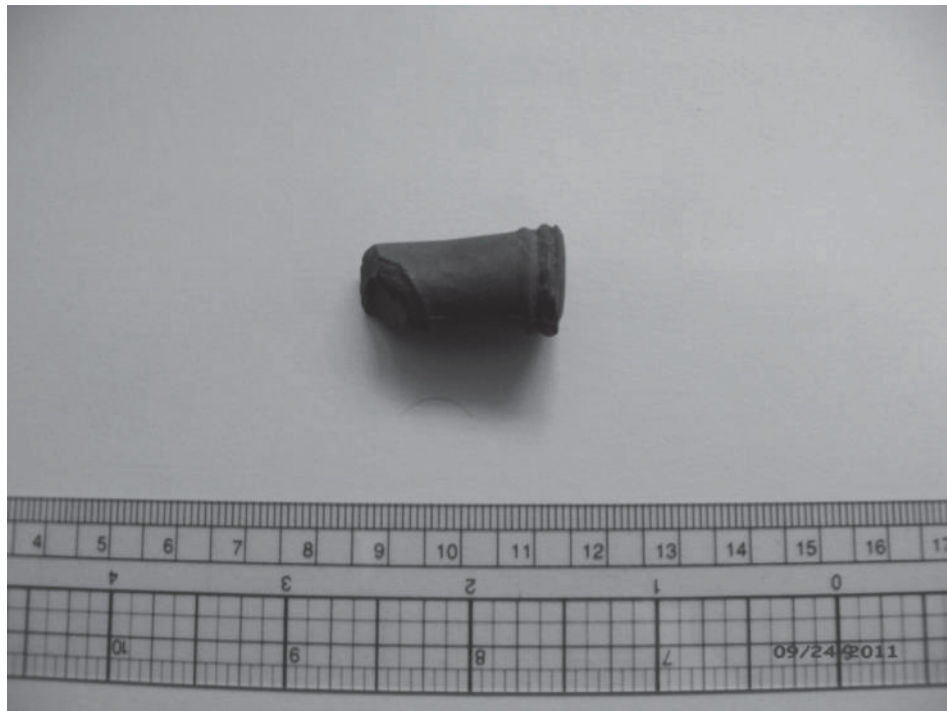


Figure 12. Pipe Stem.



Figure 13. Sheffield Folding Pocket Knife.

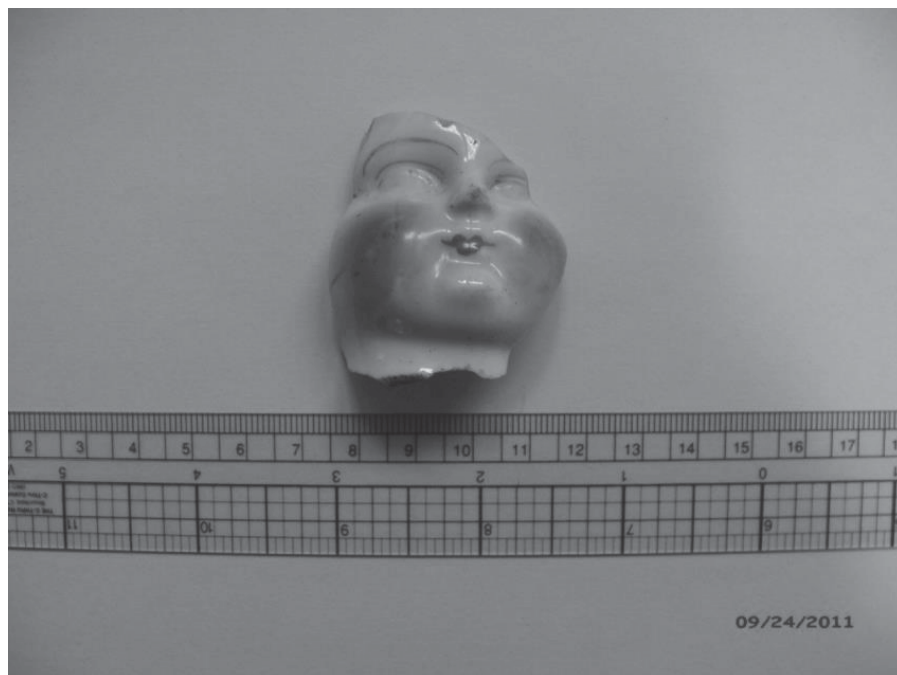


Figure 14. Porcelain Doll's Head.

Gormley House Construction

The deed described the property as being thirty-six by thirty-six foot in dimensions with a frame house occupying about thirty-six feet of the street front on the property. Archaeological evidence recovered from the excavations revealed a house of modest construction typical of the 1830s in Brownsville. Much of the landscape had changed and the property had undergone drastic modifications to the north side possibly by the judge Thomas Duncan in the construction of his own house.

The archaeological excavations revealed that the house had a dry laid sandstone foundation which was disarticulated in piles across the house lot (Feature 2). The removal of topsoil uncovered a stain encompassing the site that pointed to a well-defined crawl space or shallow cellar (Feature 4). A linear stain with well-defined edges marked the location of a possible builder's trench or wall support toward the end of the house (Feature 3). Two floor joists each made of a single brick with a concrete base were located (Feature 5 & 6). The floor joist in N108 E112 (Feature 5) was found in situ and indicated the position of the floor support beam in an east to west or front of the house to the back of the house orientation.

Architectural materials recovered from the site besides the stone foundation was large quantities of slate roofing tiles were found indicating a probable slate roof for the house, early machine cut and wire nails, and fragments of interior plaster debris. The lack of defined foundation footers was not uncommon in houses that simply had the foundation stone lying on the ground and the house built upon it without the use of a

builder's trench (Jaques 1866).

The Gormley House artifact assemblage reflects a middle class to slightly lower class standing for the occupants of the household. Plain, undecorated, whiteware with some pearlwares intermixed symbolize mainly a subsistence consumerism. The few pieces of lead glazed English whitewares possibly represent heirlooms or family items that traveled with the Gormley's from their prior Greene County residence.

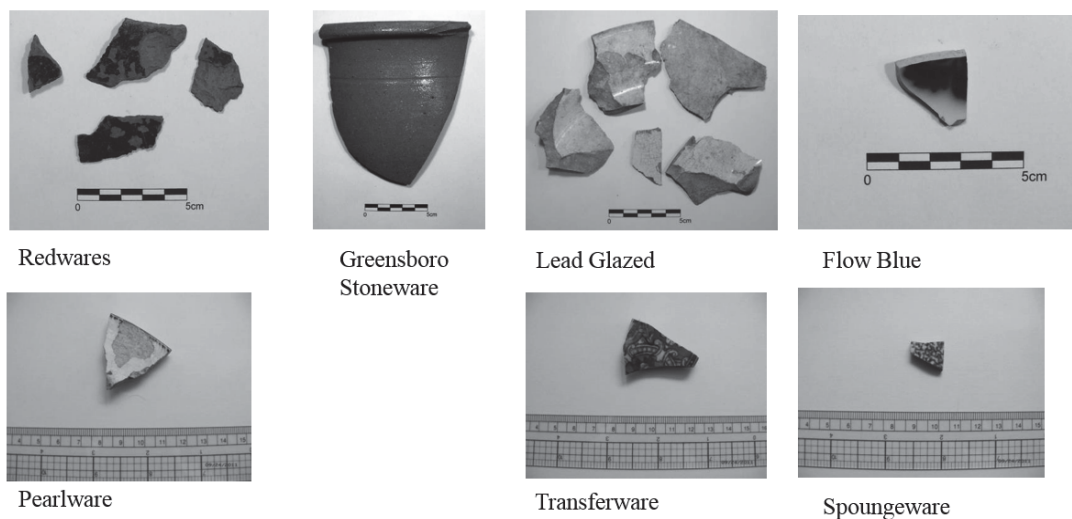


Figure 15. Ceramic Types found on the Gormley House Site.

The artifact assemblage reflects the household one would expect to find while excavating an Early Steamboat Era captain. The formative nature of the steamboat business and the packet companies kept those that worked on the boats in a transitory position of having to move where the work was going. While the steamboat provided a more sedentary worker base than the flatboats or keelboats before it, work was still part time during favorable conditions.

Gormley's living situation in a house he did not own, and his eventual move to St. Louis fit into this model of life during the Early Steamboat Era. He probably expected to

move sooner or later for economic reasons, especially after the Civil War and the period of Reconstruction. St. Louis became a hub for river shipping as the South recovered from the war. Captain Gormley would go on to pursue that opportunity and by 1870 his whole family was living in the city.

Michael Cox House

Michael Armacost Cox was born in Hampstead Maryland on July 26, 1821 (Figure 16). He grew up on his father's farm and attended school when he was not needed to work. When Michael turned seventeen, he went to work as a clerk with James

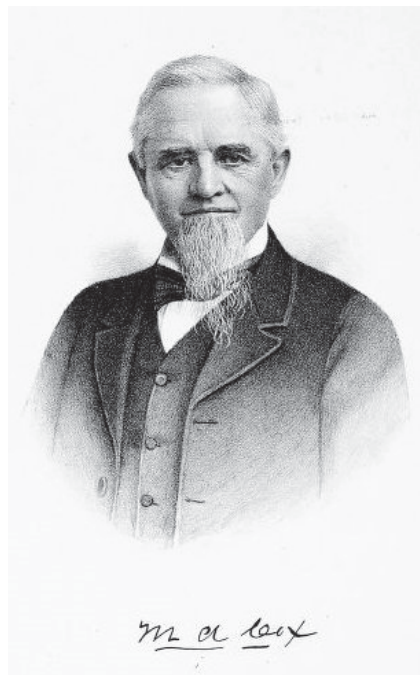


Figure 16. Captain Michael Armacost Cox (Cox 1912).

L. Bowman for six years in Brownsville. Later he became a clerk in the iron and commission house in Brownsville. He later went aboard the packet *Massachusetts* as a clerk in 1844 under Captain Isaac Bennet. It is not known when he became a captain of

his own steamboat. Local historians at the time say that he commanded over twenty-two packet boats over his career and was a part owner in them all. Captain Hendricks's journal, says that Cox was the captain of the *Germania* and *Adam Jacobs*.

Captain Cox held licenses for the Monongahela, Ohio, Mississippi, Missouri, Arkansas and Cumberland rivers. This amount of licensure was not uncommon for a person of Cox's background on the river, as many captains used the number of licenses as a status symbol of experience. Several documents mention his safe record as a captain, that "has never has an accident by which a life was lost or any amount of property destroyed" (Cox 1912). This is important to note, because steamboats were notoriously dangerous form of transportation where boiler explosions took the lives of thousands over the course of its history. These explosions were often the result of the captain ordering his engineer to "pack dynamite" by weighing down the safety expansion valve on the boiler. A travel wanted to know his captain was a safe, competent individual without the desire to put their lives at stake over time. The Cox Family History (1912) gave this description:

During the Civil War, was engaged in transporting troops,
and thus came to have a pleasant personal acquaintance with
many prominent officers of the union army ; was with Gen. Grant,
at the siege of Vicksburg; had many narrow escapes from injury
and capture, during the war ; a man of unusual force of character
and of commanding presence ; retained his physical vigor and
active interest in affairs, to the last ; a stockholder in the
Monongahela Navigation Co., and a director of the Monongahela
National Bank, of Brownsville (Cox 1912).

Michael Cox married Mary Ellen Krepps, the daughter of a prominent judge in Brownsville, Samuel Krepps. After their marriage they were living with a woman named Sarah Miller as possible boarders until they moved to their location on Church Street in 1864 (1864). The deed, dated July 18, 1864 says that the house was purchased by Samuel Krepps and given to his daughter Mary. It is interesting to note that Michael Cox was never listed as the head of household on the Census records, his wife was always listed first. There was no description of the house given on the deed.

Michael and Mary Ellen Cox had five children, Annie E Cox (age 16), Samuel K Cox (age 13), Solomon G Cox (age 16), Michael A Cox Jr. (age 8), and Mary E Cox (age 5) (1870 United States Federal Census 1870). Their personal wealth was listed as \$5,000 and their real estate valued at \$12,000 placing the Cox family well into the upper class of Brownsville. In the 1880 census, there is one female black house servant, Honesty Otta (age 18) who lives with them (1880 United States Federal Census 1880). Michael probably needed the servant, as his wife Mary passes away that same year. In the 1900 census, Michael is living with his daughter Anna who has married Michael Cox's friend Captain Isaac Beazell at the Church Street residence (1900 United States Federal Census 1900).

Captain Cox owned a large tract of land outside of Brownsville in West Virginia, its purpose or its use was never revealed in the research. He was a Democrat politically and a member of Christ Episcopal Church on Church Street. Cox was a member of the Brownsville Masonic Lodge #60 and a members of the Knights Templar St. Omar's Commandry #7.

Michael Cox died Feb 21, 1904 at his home on Church Street, he was 83 years old. Some little details of his life were revealed in Captain Joseph Hendrickson's diary. He was often a pilot with Cox, taking watch after him, or captaining one of Cox's boats in his absence. Hendrickson reveals an even tempered Cox who horse plays with his chief engineer, even once being hit by a wooden water gauge. Cox liked to play cards, an often engaged in a game of euchre or chess with Hendrickson.

Cox's military service was vague, his draft registration lists him as a "riverman" but has no other relevant information about his duties. The Cox Family History (1912) alludes to a richer story of his exploits in the service,

...during the Civil War, was engaged in transporting troops, and thus came to have a pleasant personal acquaintance with many prominent officers of the union army; was with Gen. Grant, at the siege of Vicksburg; had many narrow escapes from injury and capture, during the war; a man of unusual force of character and of commanding presence (Cox 1912).

Site Setting

The Cox House was located on Church Street, a once prominent neighborhood in Brownsville comprised of business owners and various denominations of clergy who tended to the many churches overlooking the town (Figure 17). Church Street is two streets over from Market Street in North Side Brownsville which is the oldest intact market district west of the Appalachian Mountains (Halvonik 1991).

The Cox House, now an empty lot, was demolished in 2005 after falling into disrepair due to neglect by a previous owner. The lot where the house once stood was a

groomed lawn before excavations began in 2011. The house lot is situated between a 1840s brick single family home and the abandoned structure of the Horner Memorial Nurse's Home constructed in 1928.



Figure 17. Cox House before demolition in 2005.

Excavation at the Cox House

Stratigraphic control was established by excavating all units in six inch levels. Many units did not go past one level before sterile subsoil was encountered, although the deepest units in the back of the property went to level 3.

The excavation area was broken into two areas, Excavation Block A and Excavation Block B. Excavation Block A was the area of the main house and focus of the study. This area contained nine, four by four foot excavation units (Figure 18). Excavation Block B was used to test the back area of the house for activity areas such as

privies, outbuildings, etc. The five excavation units were arranged in a straight line with units N199 E104-120 they were ninety-nine feet from Excavation Block A.



Figure 18. Excavation Block A at the front of the Cox House Site.

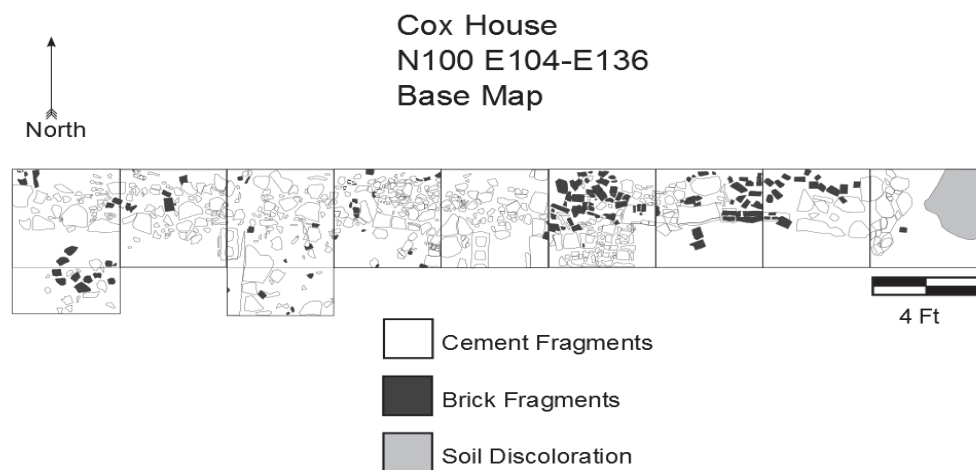


Figure 19. Base Map Cox House Site.

Feature Excavation

Features encountered after the removal of the topsoil were photographed, mapped, and then excavated in six inch levels. All feature matrices were screened through quarter inch mesh and all artifacts were bagged according to unit, feature, and level. After excavation, features were mapped and photographed. It is important to note that not all features present within a historical archaeological context are excavatable, as many features are simply architectural remains of the house alluding to its construction.

Feature 1

Feature 1 was the foundation. The foundation of the Cox House extended thirty-four feet from the adjoining house 405 on Church Street. Initial site reconnaissance found evidence that 405 was constructed prior to the Cox House as bricked in windows along the shared wall were evident. The foundation for the Cox House was constructed of large sandstone river cobbles of irregular shape and size held in place by mortar.

Feature 2

Feature 2 was an area with brick fill indicating an addition to the house at some point in its history. The Cox House was unlike its neighboring houses, 405 and 401 Church Street, which are two story over one, colonial Georgian brick style houses. Located in N100-E128-132 was a terminus of the cobble stone foundation followed by a brick addition. It was possible that the Cox House started as a two story, four room house then was added onto to create a larger home.

Feature 3

Represents the four foot addition to the foundation constructed of large sandstone

river cobbles of irregular size and making the corner to the back to the house in N100-E132-36

Feature 4

Feature 4 was the builder's trench running the length of the foundation present in all units.

Feature 5

Feature 5 was the remains of a front stoop or porch found in units N100-E108-112 and in unit N100 E120. The cement blocks were remnants of a larger porch that was replaced at some point with a smaller cement structure.

Feature 6

Feature 6 was a terracotta downspout pipe abutting the foundation in N100 E136

Feature 7

Feature 7 was a small ovular shallow refuse pit extending 7 cm in depth and was filled coal ash, clinkers, and small glass fragments.

Summary of Recovered Artifacts

A total of 2318 artifacts was recovered from the Cox House Site during the 2011 field season (Table 2). The most numerous artifact category was domestic, (n=1180) with a wide variety of bone, ceramic, glass, leather, metal, terracotta, textile and miscellaneous. The largest domestic category was glass, (n=605) with a wide variety of flat, milk glass, vessel, and unidentified. The next largest material in the domestic category was ceramic, (n=532) with a variety of whiteware, pearlware, stoneware, ironstone, redware, porcelain, transferware, creamware, earthenware, red clay,

spongeware, terracotta, vessel, yellowware and unidentified. This category included items, such as, buttons, tableware, and flower pots .Bone, (n=19) was the third largest domestic category, all of which was fragmentary. The fourth largest domestic category was plastic, (n=14) with two different classes vessel and unidentified. Metal, (n=6) was the next largest domestic category with two different classes, ferrous and non-ferrous. This category includes items, such as, scissors, a hook, and a battery. Miscellaneous material, (n=2) was the next largest domestic category which included a melted Bakelite and a Bakelite body-rim fragment. The two smallest domestic categories were leather and textile, both (n=1) with unidentified classes. These materials were leather fragments, and a gas light mantel fragment.

The second most numerous artifact category was architecture, (n=990) which included various materials; asphalt, brick, cement, ceramic, glass, metal, plaster, stone, terra cotta, and wood. The most numerous architecture category was glass, (n=509), with three classes, flat, vessel and unidentified. These classes include things such as windows, bottles and vases. The next largest architecture category was metal, (n=251) which had only one class, ferrous. This category includes items such as, nails and screws, fasteners and plumbing. The third largest architecture category was ceramic, (n=179) with a variety of stoneware, red clay, yellow clay, earthenware, porcelain, and ironstone. This category consisted of mainly bricks. The other materials that make up the architecture category are as follows, in order from most numerous to least numerous, asphalt, stone, terra cotta, wood, brick, cement, and plaster. These materials were made up of shingles, a drain pipe and several unidentified objects.

The third most numerous artifact category was personal, (n=62) which was made up of a variety of materials: metal, hard rubber, glass, and ceramic. Ceramics were the most numerous material found in this category, (n=35), this include items such are buttons and marbles. The second largest personal material was metal, (n=22) which was separated into ferrous and non-ferrous and including items, such as, coins, a ring, and buttons. Glass is the third largest personal material, (n=4), which consisted of jewelry and a marble. The last personal material category was one vulcanized “Goodyear” rubber button.

Table 2. Artifact Frequencies Cox House

<u>Cox House Site</u>			
Artifact class Number & Description		Count	%
<i>Domestic Group</i>			
1.	Glass	605	26.10
2.	Ceramic	532	22.95
3.	Bone	19	.81
4.	Plastic	14	.60
5.	Metal	6	.25
6.	Miscellaneous	2	.08
7.	Leather	1	.04
8.	Textile	1	.04
<i>Total Domestic</i>		1180	50.90
<i>Architecture Group</i>			
1.	Glass	509	21.95
2.	Metal	251	10.82
3.	Ceramic	179	77.18
4.	Asphalt	17	.73
5.	Stone	12	.51
6.	Terra Cotta	12	.51
7.	Wood	5	.21
8.	Brick	2	.08
9.	Cement	2	.08
10.	Plaster	1	.04
<i>Total Architecture</i>		990	42.70
<i>Personal Group</i>			
1.	Ceramics	35	1.50
2.	Glass	4	.17
3.	Metal	22	.94
4.	Rubber	1	.04
<i>Total Personal</i>		62	2.67
<i>Fuel Group</i>			
1.	Metal	32	1.38
<i>Total Fuel</i>		32	1.38

Table 2. Continuation of Artifact Frequencies Cox House

<i>Miscellaneous Group</i>			
1.	Bone	10	.43
2.	Shell	4	.17
3.	Glass	4	.17
4.	Stone	4	.17
5.	Metal	1	.04
6.	Ceramic	1	.04
7.	Plastic	1	.04
<i>Total Miscellaneous</i>		25	1.07
<i>Natural Group</i>			
1.	Chert	17	.73
<i>Total Chert</i>		17	.73
<i>Hardware Group</i>			
1.	Metal	7	.30
<i>Total Hardware</i>		7	.30
<i>Unidentified Group</i>			
1.	Metal	1	.04
2.	Glass	2	.08
3.	Plastic	1	.04
4.	Unidentified	1	.04
<i>Total Unidentified</i>		5	.21
TOTAL		2318	100.00

Notable Artifacts

Various artifacts were recovered from the excavations at the Cox House. Multi-colored transfer printed whiteware with red, green, and black printing was found. There were a several pieces of sponge printed fragments. There was a large assortment of pressed glass items and “grandmaware” along with fragments of medicinal bottles. Personal items included several muti-colored glass buttons, prosser button, and a Goodyear vulcanized rubber button bearing the patent date of 1851 (Figure 21).

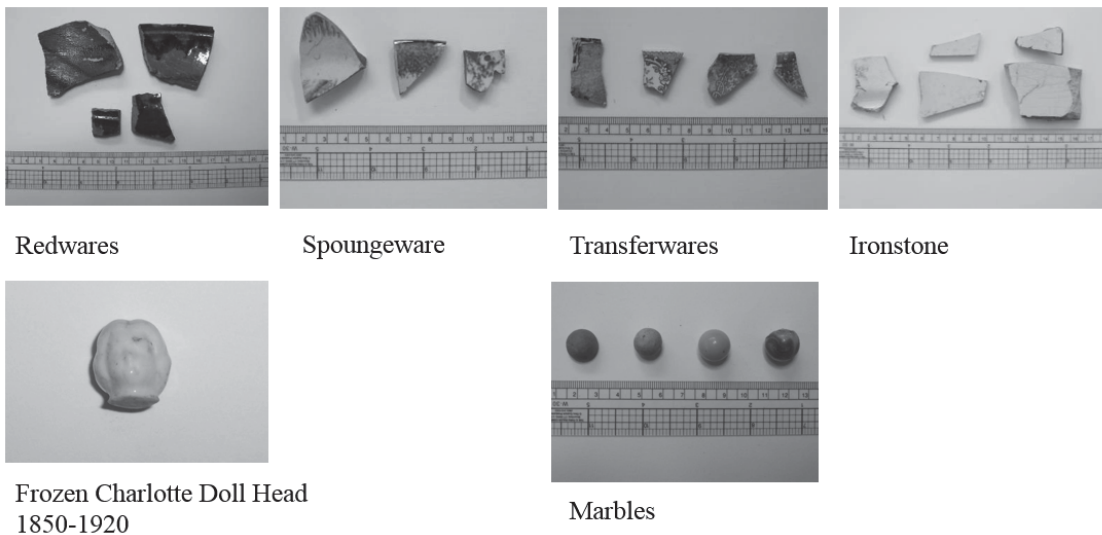


Figure 20. Ceramic Types found at the Cox House Site.

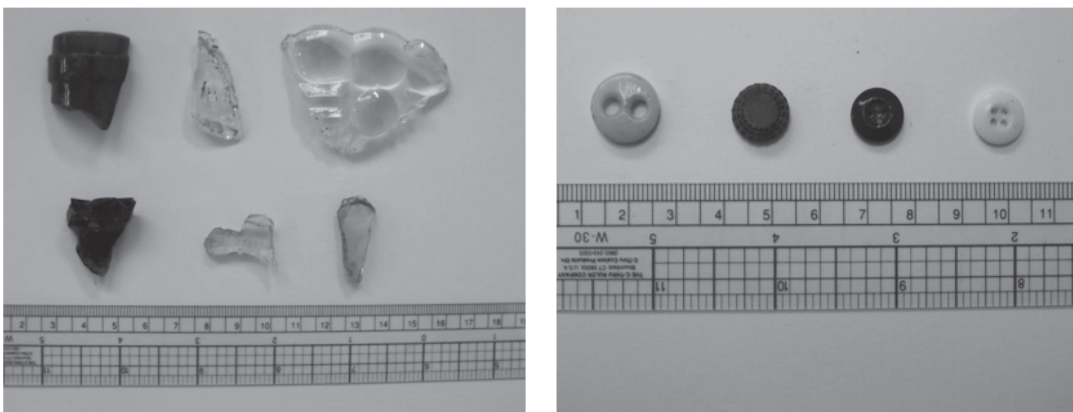


Figure 21. Selected Pressed Glass Fragments and Buttons.

In unit N199 E104 was found a small glazed ceramic doll head (Figure 20). Upon further research, it was the head of a “Frozen Charlotte” doll. These dolls were made between 1850 and 1920 and are non poseable with either hands to side or bent out at the elbow. Young girls would paint or make clothing for Charlotte and recall the cautionary tale of “Fair Charlotte” a girl who freezes to death by disobeying her mom and wearing a jacket on a cold sleigh ride to a ball. It is possible this doll belonged to Mary or Annie Cox.

Cox House Construction

The Cox House was built as a brick house on top of a cobble stone foundation. It probably had five to eight rooms or more during the time it was used as a dwelling. The front of the house measured 34 feet and an unknown dimension to the rear of the property. The deed dated July 18, 1864 has no description of a house on the property, although this was common. The property was deeded to Mary E. Cox by her father Judge Samuel J. Krepps.

The house had a side gabled roof that was probably at one point covered with slate shingles. Architectural items found in the archaeological deposits yielded little clues about other materials. There were fragments of white plaster, wire nails, some intact trim components as the house was just torn down in 2005. A well-defined builder’s trench extended across the front of the house, yet the artifacts recovered from it yielded little information.

Testing in the backyard of the house yielded no clues about its use in the past. The construction of a large set of garages complete with a cement pad in the 1960s covered a

large portion of the back lot. It is possible it covered privy holes or any types of remnants from out buildings. A ground penetrating radar survey was conducted by California University of Pennsylvania on the back lot, yet yielded no additional information.

Comparative Analysis of the Gormley and Cox Houses

Artifact assemblages recovered from the two sites give a small window into the overall status of the rivermen who lived in the homes. The Gormley ceramic assemblage which may indicate consumer choice was a small sample that likely reflects only having half of a site to excavate. However, it may mean something completely different when dealing with class and class status. Gormley was captain during the waning years of the frontier economy and with that came social capital with his rank as a steamboat captain. As a steamboat captain during the Early Era, he had an ascribed status within the community and the ability to negotiate for items from various merchants or businesses by his ability to manipulate shipping charges. The ability to negotiate price and terms for items, especially those being shipped could have allowed Gormley to negotiate for higher value items. However, Gormley's ceramic artifact assemblage was on the middle to lower class spectrum,

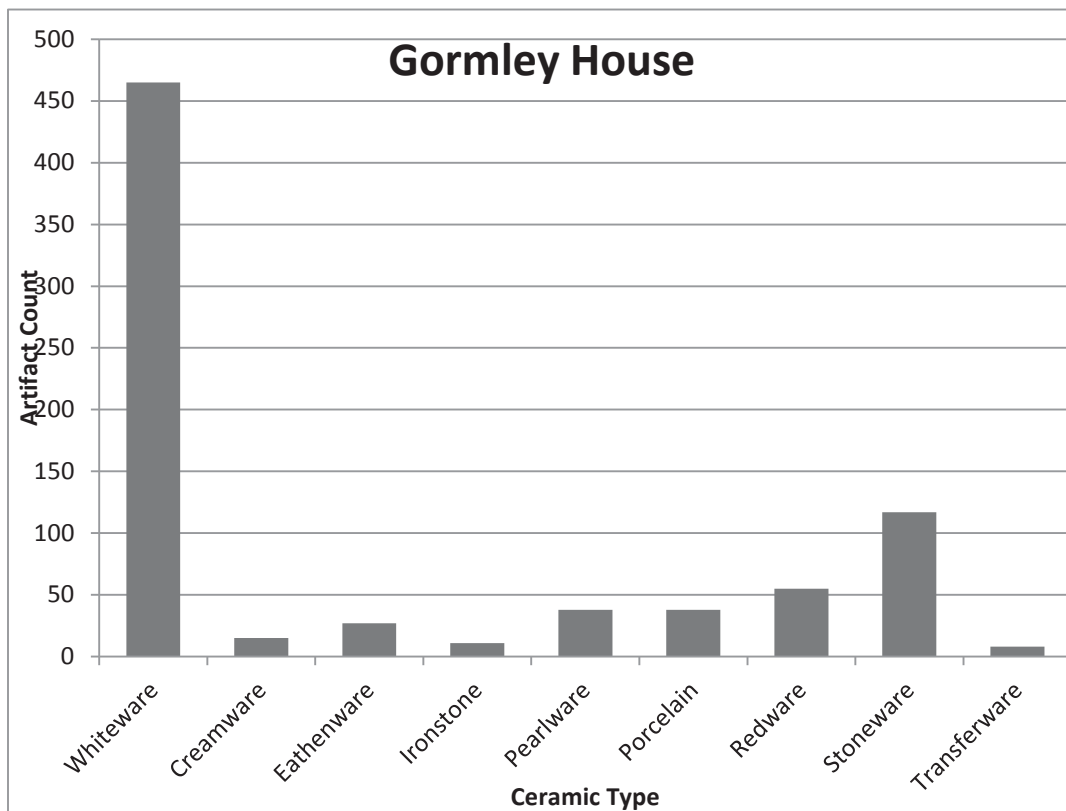


Figure 22. Ceramic Types and Frequency at the Gormley House

mainly plain undecorated whitewares. The only piece to note was an English lead glazed dish that was found on top of the coal pile, perhaps where a floor once sat above. At one point, at least during the 1850 census, he has seventeen people living in his home, ten of them African Americans, perhaps escaped slaves. The wealth necessary to feed that many people including his own wife and children, would mean that capital was dispersed and even with the ability to negotiate capital, he was unable to afford nicer consumerables.

Cox on the other hand had a different artifact assemblage that indicated a wealthier upper class consumer with hand painted ceramics, pressed glass tablewares, and multicolored bottles and glasses. Cox married into wealth with his wife a daughter of a prominent judge in town, and their property on Church Street having been given to

them by his father-in-law. Michael Cox's background as a merchant, steamboat captain, and board member of the Monongahela National Bank, secured his position in the upper class echelons of Brownsville's elite. Unfortunately, the artifact assemblage that was recovered from the Cox House was a small sample to compare to Gormley; more excavation at the Cox House would be necessary to recover a more diversified assemblage.

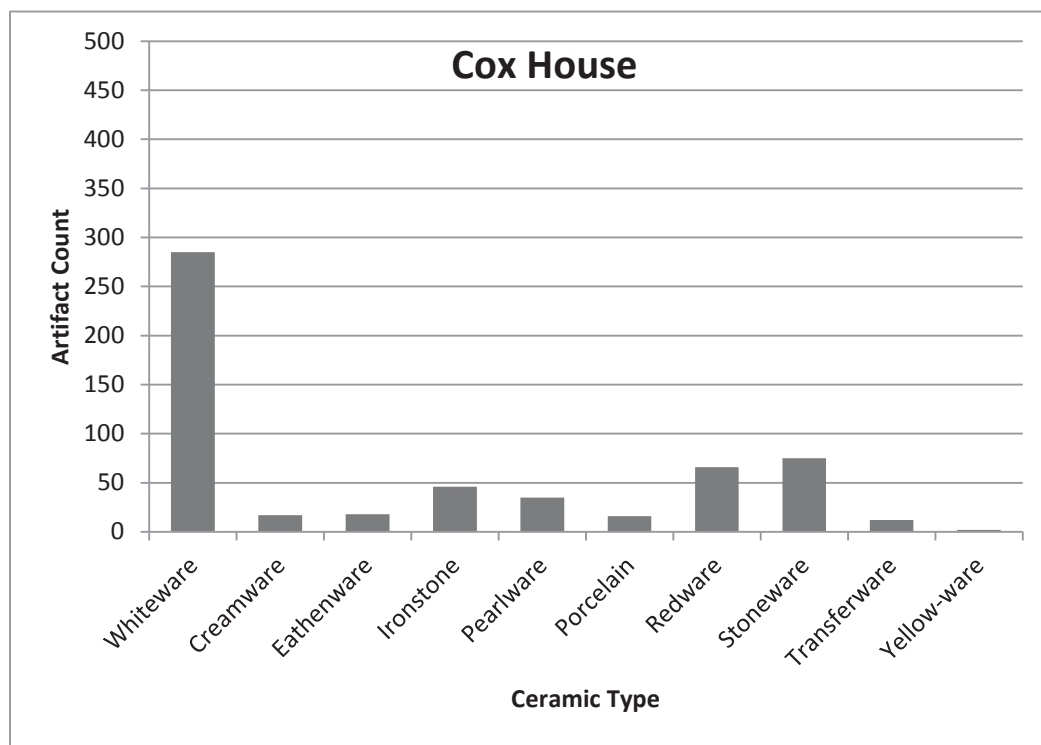


Figure 23. Ceramic Types and Frequency at the Cox House

The low artifact yields from both sites make creating a detailed consumer based analysis of the class status between the two households unproductive. I have established that like Wurst (2006), class is more than consumerism. I am going to use Karen Methany Bescherer's (2007) model of using the houses as artifacts to understand class.

The neighborhood that the Gormley House occupied was a mixed neighborhood with rivermen and laborers living along Bank Street. Gormley's house was within sight and walking distance to the Bridgeport Wharf where his boat would be waiting. He lived on the terrace on the middle of Bank Street, his house on a hill.

Gormley's house was constructed in an impermanent fashion. He did not build the house, it was already constructed by 1836 and a brief description appears in the deed. Regardless, I believe Gormley and his family viewed their time in Brownsville as a stepping stone to St. Louis where the packet trade was booming after the Civil War. He was already in business in St. Louis, and probably spent a great deal of time away from home fostering his enterprise there.

Gormley's lifestyle was entrenched in the Early Steamboat Era, he was a part owner in his boats, and had multiple business opportunities in other cities such as St. Louis where he ran advertisements for his packet boat. The census data shows that during this time, the career of steamboating was becoming hereditary, in 1860 his son Francis was a Ship Carpenter at age twenty-one, John was a pilot apprentice at nineteen years old, and Henry was an engineer apprentice at seventeen years old. By 1870, the whole family moved to St. Louis.

Captain Michael Armacost Cox on the other hand was living in a prominent neighborhood on Church Street, with neighbors that were a mix of merchants, steamboat captains, and a new class of mine owners. Cox was a merchant by trade, and had a foot in the Early Steamboat Era, but his gains were made in the Middle Era. He began construction of towboats at his boatyard in 1870, a full two years before Brownsville's first large scale coal mine was opened.

The Cox House is a reflection of that wealth and power in Brownsville. A prominent brick house with massive stone foundations gave the house an air of permanence. When the Cox family invited guests, there was a parlor for them to discuss business or pleasure. The house became a symbol of the Cox family's wealth and influence in the town.

The houses then become the artifact. Historical archaeologists have traditionally based the class of an individual on the artifacts found in his or her possession. Class status became a quantifiable variable, a revelation if the artifacts were of "high quality" or "low quality" as reflections of an individual's economic status (Wurst 2006). However, basing class analysis purely on material culture ignores the ephemeral social capital an individual may possess, in favor of economic capital. For instance, an individual may work a low wage job yet possess fine ceramics due to bartering connections within the community. This networking has no connected wage earnings and would not be revealed in the archaeological record.

Gormley and Cox had their social networks on a variety of levels. Much is unknown of Gormley's social networks in Brownsville or St. Louis, although it's possible to extrapolate. He probably knew Cox and Hendrickson, Bennet, and other steamboat captains in town as they were a select "class" all to themselves. In St. Louis Gormley may have known Samuel Clemens (Mark Twain) as he built and piloted the *A.B. Chambers*, a steamboat Mark Twain would later take command of.

Michael Cox interacted within a variety of social networks as well. He too was a member of the elite steamboat captain's "class" in Brownsville. He also moved about the business networks of boat builders, merchants, bankers, and even the esoteric or "hidden"

networks of the Free Masons. Cox was a capitalist in the traditional sense in the Middle Era, his social capital was backed by monetary capital unlike Gormley. He went to school as a child, became a merchant, and then a captain. But then he became an investor and diversified his businesses. Cox probably would have viewed himself as a business man above a steamboat captain.

Evidence of the transition from the Early Steamboat Era to the Middle Steamboat Era was reflected in the two captain's houses. Captain Gormley was positioned in the Early Era where his identity, and the identity of the workforce was in its formative stages. The partial sedentary lifestyle that the steamboat industry afforded over the flatboat and keelboat eras was visible in the Gormley artifact assemblage and the construction of his house. However, the Early Steamboat Era's transitory nature was also evident in Gormley's actions, he eventually moves his family to St. Louis to pursue other opportunities during Reconstruction. This ability to move around where work was plentiful was a marker for the Early Era as many workers were highly mobile.

On the other hand, the Cox House excavations revealed markers of the Middle Steamboat Era as the steamboat industry consolidated and corporations began taking over the towboat industry. The diary of Captain Joseph Hendrickson paints a picture of the Middle Steamboat Era where work on the river becomes full time and the boat becomes a "home". Both Cox and Hendrickson indicate that some of their son's follow them onto the river as work on the boats becomes hereditary and families become river families. Coal during this time period replaces freight as the main shipment on the river contributing to the demise of the packet boat industry. Captain Cox represents this reoriented economy as his boat yards shift to building towboats and he diversifies his

business interests outside of the river. Captain Hendrickson moonlights on the towboats to work full time and support his family as his role of captain was transformed into a wage earning “superintendent” or “foreman” on the towboats. Lastly during the Middle Steamboat Era, increased worker unrest of the captive mines of US Steel and others begin to foreshadow the worker unrest on the boats that would begin in the 20th century.

The archaeological excavations of the Gormley and Cox houses revealed a unique history that has long since left the rivers, the steamboat. Through their households, a window was opened into two different experiences during two different eras of technology and social transformation on the river. While more work is needed, I hope that these two excavations serve as a baseline for future work in the study of river transportation.

Chapter 4. Late Steamboat Era 1919-1950 Pre-Union Labor

“For that’s what a towboat is, a closely tied family of twenty to thirty men and women, totally independent, as removed from the rest of the country as though it were out in the middle of some desert.”-*Towboat River*, Edwin and Louis Roskam.

The demise of the packet steamboats, a throwback to the frontier days where wealthy individuals took the entrepreneurship to the rivers, and the rise of the consolidation of coal interests under a few wealthy banners of industrialists, left the towboat crews at the mercy of change to a corporate model. The packet steamboat industry collapsed in the Monongahela Valley by 1920. The last packet of the Pittsburgh, Brownsville, and Morgantown Packet Company left from Pittsburgh to Morgantown, West Virginia. Competition with towboats, railroads, and a lack of capital investment led to the demise of the packet boats. Unlike the railroad and canals, the steamboat packets had no investment from federal contributions but only from individuals (Mak and Walton 1972). The passenger transportation business of steamboat packets was slowly absorbed by the railroads as its networks reached further westward.

The steamboat crews themselves were employees of these larger companies. The towboats were not considered separate from the coal mines they serviced. This late era of the steamboat industry would see worker unrest and labor organization on a large scale throughout the Monongahela Valley.

This chapter documents the working life on a steamboat and how the conditions there contributed into the formation of worker identity. This chapter is written as an industrial ethnography in the vein of Gamst (1980) *The Hoghead* and Oblinger's (1984)

Cornwall (Oblinger 1984). While the subject of industrial ethnography meant watching workers perform their tasks at the job site, the ability to do so with those who worked on the steamboats was impossible. However, interviewing workers about the minutiae of their daily lives on board a steamboat goes well above the realm of a traditional oral history or historical ethnography and places it within the realm of industrial ethnography. Industrial ethnography as defined by Gamst (1980 p. 13) is an,

“Investigation [that] covers behavioral and attitudinal patterns of workers, symbols important to workers, paths of communication within work organizations, places of work and their physical arrangements, and social interactions [of] coworkers and others both on and off the job...investigation of relations among such organizations and their relations with the wider social order.”(Gamst 1980)

When I began this project in 2010, I realized that time was running out for many of the men and women who labored aboard the steamboats of the early 20th century. I understood that as time marched on, many of their experiences of life on the river would be forever lost with them, untold to anyone. The Late Steamboat Era (1919-1950) saw sweeping changes such as the fight for unionization and the debut of the diesel towboat that placed increased pressure on the river worker. Their stories during this time period are relevant to the workers who preceded them. Life on a steamboat changed little from the introduction of the towboat in the 1830s. Workers labored as they had done before, keeping the boat operating for twenty-four hours a day often seven days a week. Deckhands kept the barge tows together and cooks prepared the meals as the boat was under way. The apprenticeship method of learning on the boats that passed knowledge

from a master such as a chief engineer to an apprentice such as a striker-engineer carried on many of the traditions, beliefs, symbolism, and historical memories of work life on the river of those who came before. Work life on the towboat was a common denominator between those people who worked on them in the 19th century and those of the 20th century. It was their experiences I wanted to capture in order to understand the past better, and to gain an insight into the everyday life of those who worked on the steamboats.

Before I started this project, parameters required by the Michigan Technological University's Institutional Review Board had to be met. The IRB's procedures dictated that a participant consent form detailing the purpose of the study, procedures, potential risks, potential benefits, confidentiality, and rights be presented to each individual participant. This form was then signed by the individual and myself. Each member of the oral history project had to sign the document protecting their rights as owners of the material and their anonymity. The approved IRB reference number issued at the completion of this study was M0571.

The process for finding people who had worked on the boats was challenging. I placed advertisements in local newspapers and inquired around town if anyone knew of someone who worked on the river during the steamboat period. When I began excavating the two captain's houses detailed in the previous chapter, reporters ran articles in regional papers to which many of those interviewed here responded. Initially, I had a small pool of people who led me to others who wanted their histories documented, using the snowball method of recruitment.

In all, I have collected eight oral histories from workers ranging from deckhands to captains and from cooks to engineers. Many of my interviewees were in their late 80s and early 90s in age. Their names, for the purposes of this study have been changed. Questions ranged from “what did your parents do?” to “what was a typical work day like on the boat?” I asked them questions about their parents and their family life. I tried to enter into their communities through their own words and experiences. A copy of the questions I used are in Appendix I.

As will be shown, the boat was more than a work place, it was a home, and a refuge from the economic ills of the Great Depression. This chapter will detail the workscape of the boats, the community life, work life, dangers, and free time of those who labored on these self-contained floating communities called steamboats, in an attempt to understand, in their own words, the formation of their workplace identity.

Depression Era Workers: Community and Family life on the Monongahela River

My participants came from a variety of towns outstretched along the Monongahela River. Many of these towns were once directly involved in boat building, mining, or steel fabrication. The towns of the post-industrial era bear little resemblance to the once thriving communities of the early part of the 20th century. However, their communities provided the workforce that the river industry needed in order to fill the demands of the multitude of manufacturing centers along the Monongahela, Ohio, and Mississippi rivers. Towns such as New Eagle, West Newton, Chew Town, Newel, and Brownsville supplied Jones and Laughlin, Carnegie and Illinois Steel, Dravo, and other steel mills the riverworkers necessary to keep the supply of coal moving to their furnaces.

By the 1930s the Great Depression was looming over the Monongahela Valley. Workers by the thousands, many first and second generation Americans, were forced to labor where they could. The river, like the steel mills and coal mines in the area, worked twenty-four hours a day at an ever increasing pace due in part to massive public works projects that required steel. For some, the opportunity to work on the river was a family business for others it was the only option to support themselves or their family members during this economically troubling time.

Captain Talbot Smith was born in 1924 in a small town called Newel to Czechoslovakian parents. His father was a brick layer and cement finisher who worked in the local chemical plant. His mother came to the United States as a young girl who had to live with a host family in New York before coming to Newel to marry Talbot's father. "She came over here when she was sixteen and they went over there and brought her, her and her best friend. They did that back in those days. They stayed in New York. They had to stay there for two years, you know from sixteen to eighteen. She went to be a cook in a restaurant, then she came to Newel and married my dad and became a housewife. She wasn't allowed to leave the house. Her enjoyment was going up on the roof of the apartment- they had nowhere to go. The clothes they had were the clothes they had."

"I was born and raised on the bank, the river bank," Talbot said. "My dad got killed when I was sixteen years old so my brother was eighteen, and he got a job in a mill. And this was the summer but I was worried about football and sports like that. Steve [a mate on a steamboat] saw my brother and he said, 'what's that big lazy brother doing?' I was working the junkyard [in] town. Steve said, 'I can get a good job on the river on the boats there.' So my brother came and told me. 'I said yeah man that sounds good to me.'"

My mother said no, I'm going to school. This was the summer. And I said, 'mom he told me I can make one trip to New Orleans, [and no one was working during the Depression] so I'll make this one trip mom, and I'll be back. And then I'll go to school, you know I go to school.' 'Oh you'll go to school?' my mom said. So one trip became two trips, then three trips, and so on... And that was the end of my schooling! Ha-ha!"

Nolan Connor grew up on Catherine Avenue in Brownsville. Brownsville at the time was deeply connected to the river with various captains and crew members living throughout the community. It was not uncommon for a deckhand to live on the same street as a boat captain. Connor's parents were of Irish descent but were many generations removed from being immigrants. His father was a railroader. After his death his mother served as a cook for the Union Barge line working on steamboats. I asked him what the influence was for him getting a job on the river. He replied, "A fellow by the name of G___ C___ knew that I was not working and he said, 'Nolan would you like a job?' He lived right next door to my dad. 'I can get you a job on the river firing, you won't have to walk the barges.' And he did, and I kept it for around two years."

Justin Wilson was one of the workers who came from a large family with ties to the river. "Well they [my parents] were from West Elizabeth and Elrama in this district. My grandfather and my grandmother raised me. And that was a family of twelve and I made the thirteenth. So all of my uncles were called brothers, if you know what I mean, because I was raised with them. And anyhow my grandfather he worked in the coal mines and then he did other things you know. Then during the Depression he just worked for the borough and things like that. And then they started getting jobs, my uncles. And then that's why I went on the river, I had an uncle D___ F___, he went on the river. He

went firing boilers on the first boat he was ever on, and it was chartered by Carnegie and Illinois Steel, was the old *G.W. McBride* (Figure 24). It was the name of her. He was firing boilers on her and through that, two or three others [uncles] got jobs on the river. I was interested in them because we lived right along the river, right in West Elizabeth. And at that time, there was so many boats going up and down, you know, there was always boats coming and going and waiting there waiting on the lock. I got interested in them as a kid because that's all I did around the river, you know."

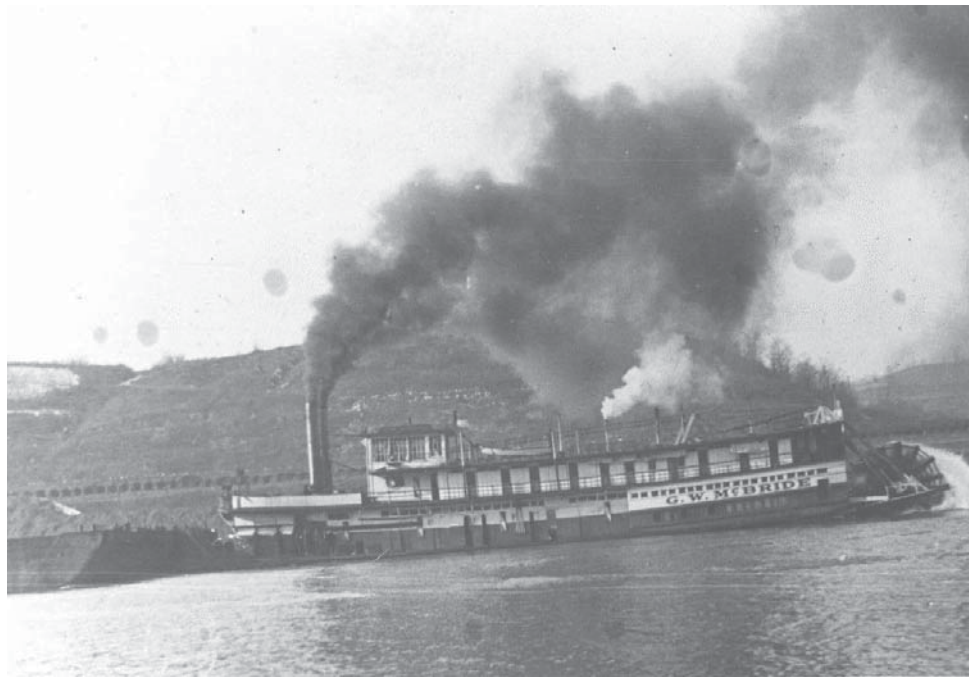


Figure 24. The *G.W. McBride*. Photo courtesy of California University of Pennsylvania.

I asked if others from his community worked with him on the boats. "Well, they came from all around. They came from West Virginia; a lot of people on them riverboats came from West Virginia. Up the Allegheny River, it's surprising. Huntington out in the middle part of the state they traveled back and forth, cause you only had to travel once

every ten days. A lot of people lived on farms and stuff. Greene County, yeah. But there was a lot of rivermen around here.”

When I asked him how he started on the river, he recounted this, “Then I...my uncle told me, 'You're big and strong, you should be able to get on the boats. We'll fib about your age a little bit.' I weighted about 180lbs then. [I was] fourteen, I wasn't quite fifteen yet. So our family moved to Dravosburg. And they had a landing down there, Risher Landing was the name of it. It was Pittsburgh Coal then, Risher Landing that's where the boats coaled. That's where they put the fuel on. Coal yeah. But anyhow, we went to Captain E___ from Elizabeth there, he was shore boss. And I would cut grass for him and do odd jobs up there at his place up at Walker's Heights.”

When I asked Justin how his life on the river affected his marriage, he replied, “Oh yeah. I think she enjoyed that. Getting rid of me for seven days. I had a friend who said, 'If it wasn't for me working on the river, seven on and seven off, I'd never been married as long as I was. Me and my wife we have our time, she has her time, I have my time and we have enjoyed each other that way.' He worked in the mill one time. He said, 'We was at one another all the time!' Justin said, “After a few days, I'd have to call the old woman, you know, when I was feeling lonely People got along better I think!”

Scott Hurst, a captain for the Pittsburgh District of the Army Corps of Engineers described his home town. “Lock #4. I lived right...in them days, the Corps of Engineers, Pittsburgh District Boat Yard was over at Lock #4. And I lived right beside it. So that's how I got to working for the Corps. See the boatyard at Lock #4 in its day was something. It stretched for about a quarter mile along the river there; just...well the Charleroi-Monessen Bridge went up and over it. I was raised in the first house below the

bridge. And when I was a kid, I worked for the local grocer, and he would send me down to the carpenter shop for sawdust for his butcher shop, you know. North Charleroi. The old Lock #4 was right in front of my house, where the boatyard was. At the lower end of the boatyard, they had a railroad side, where they came in there. All of the cement, that came in there was stored at the lower end, all of the lumber. Then they had a track that ran about quarter mile up along the river, and boatyard was all spread out. The carpenter's shops and that, was at the other end. They had a steam traveling crane that went up and down the river there."

When asked how he aspired to work on the river, Hurst said, "The old steamer *Monallo*, my father fired it, I fired it, a lot of people of Lock #4 worked for the Corps of Engineers in those days. That was the biggest employer. See they moved the boatyard, I believe in 1946, to Neville Island. Yeah, my father and mother met on a steamboat. He was a fireman, she was a chambermaid. Well, when they got married, he got off the river. He worked on the railroad over in the Monessen Mill, then. Then he got killed in an accident when I was just eleven years old, then I went to work on the river when I was sixteen. Well that summer I was a quarterboat attendant, I got to know the crew on the towboat. And that's all I ever wanted to be as far back as I can remember, was a steamboat pilot. See my dad knew all the US Steel employees cause he was a fireman on the steamboat. My grandmother lived at Rices Landing, right by the old lock. You know, the old US Steel steamboats when they left Lock #6, they would get up to the coal mine and they'd only be gone maybe an hour or two hours at the most and come back. So my dad would take me on the steamboats. Hell, well when I was just...they'd let me steer, you know, blow the whistle. So that's all I ever wanted to do was work on a steamboat."

Captain Greg Hall grew up in a town named Wilson along the river. “Well we lived in a place called Wilson, Pennsylvania. And that was Carnegie-Illinois Steel Marine Way at Coal Valley. Coal Valley, Pennsylvania. And that’s where I used to get in and off the boat. And I got that I could, I could hear his boat blowing and I would get on my bicycle and I had a place where I could look down on the river. Well there were people that lived in Brownsville, deckhand from different places, some worked from Huntington to work on the boats .There were a few captains and pilots who lived up there. And Dad’s engineer E____ C____ he lived in the same row we lived in and they were friends. There were a lot of people up there. A lot of steamboaters lived in Wilson. It was handy, and I met them all. That’s when I stepped on the boats, it was October 1939 on the steamer *Allegheny*.”

“I was just in love with steamboats cause my daddy was a master pilot. And the first thing I remember he had me and my mother, I was just a little tot, he took us for a trip. From then after during his summer vacation I’d get him to take me. Well from day one I fell in love with steamboats. Steamboats had had a certain aroma with steam and the oil. It just had an aroma that I can still smell. I just loved it. And as it so happened I was in twelfth grade, at that time it was before the union, the captain and the chief engineer, they could hire you know. Well his name was E____ C____, that was my Dad’s chief engineer. That was on the steamer *Allegheny*. So he called up my mother, he didn’t talk to my dad or nobody. And he always said, 'Mrs. H____, if Greg wants a job, I’ve got a place for him, if he wants to take the job.' I came home and my mom said, “Do you want to go to work on the boats?” I said, “Oh yeah!” 'Mind now, you have to quit school and don’t think you’re going to get on there and come home! You get on there, you are going

to stay! You stay and get your license and so forth.' But anyway, I made arrangements so that in the next day or so to catch the boat down at Lock #22 and I'd be the striker-engineer. And I can remember, waiting on the boat, and my daddy he was coming down there on the lock wall to call the office. He said, 'What are you doing here?' I said, 'I'm going to work on the boat dad!' 'You are!' And Mr. C_____ said, "That's alright captain, he's alright! I needed a man!" 'Oh that's OK!', but my dad was just shocked. But that's how I got started."

Anne Novak, who worked for Jones and Laughlin as a chambermaid described the community of Chew Town where she grew up. "A good bit of people from here [Chew Town] worked on the river. Even going up into Vesta 7. C_____ M_____ worked there. I have to go back in my mind. I think his nephew worked on the river. It was pretty much a lot of river people here. I started school from this house, first grade and I have been here ever since...this was their home [parents]. After my dad passed away, my mother went to Chicago. I came down and took over. I've lived in about three houses here in the same town, I've never moved out-of-town. It was that kind of place, people were close knit in that kind of way. If somebody passed away, everybody in the neighborhood came and they would make you a ham or bring potato salad, it was that kind of thing, that's just how they lived. Everybody just got together. Even though not everybody worked on the boats, we were all family because they knew families from the area."

Both of Anne's parents were first generation Americans of Czechoslovakian and Austro-Hungarian descent. Her grandparents were coal miners in the local mines. She said of them, "coal mining is all they knew." The Novaks were Byzantine Catholic and

her family attended church in West Brownsville, a few short miles up the road. Her mother was a homemaker and her father had a long history of working on the steamboats. “My dad worked on the river, I had one aunt and I had two other aunts that worked on the river... My dad worked, his brothers worked on the river. And now my brother Steven, he worked on the river. He worked for Consol. A steamboat family. He [my father] was...well when he first started he was a deckhand. He advanced up and he was a pilot. He died in '59 and worked on it until then. I mean I was little and he was working on the boats already. I would say from the 1930s to 1959 at least that long.”

Another woman who worked for Jones and Laughlin was Sofia Kowalski. Sofia grew up in a small town named West Newton. The town is located on the banks of the Youghiogheny River which was known for its radiator manufacturing. Sofia's father and brother both worked for U.S. Radiator. “My father worked there and my brother worked there. They were no coal miners,” she said. When asked if others from West Newton were working on the river, Sofia's answer was surprising. “There was nobody from West Newton. They wanted jobs, but they didn't hire them. There was about three or four girls who went to get a job.” Sofia explained that there simply weren't enough jobs available to hire the women on the river. When she described her family life, Sofia went into detail about her and family's life during the Depression.

“They weren't hiring, it was the Depression. Everybody was looking for work. You couldn't get work in Pittsburgh, I went to New York to work. Housework. Because, you had to make a living. They didn't give you welfare, they didn't give you nothing. You didn't work, you didn't eat. Then I had to take care of my mother until she passed away. My father died when I was three years old. My mother raised seven kids. See the

garden, she dug this whole place up. She planted potatoes, corn, tomatoes, beans, radishes, beets, she planted everything. That's how we lived, on vegetables. She dug all of this garden. She planted celery, broccoli, she planted all of the vegetables that she jarred, picked pears, peaches, pickles that cracked in your mouth. She made piccalilli. Best pickle you'd ever want to eat! Tomatoes, she'd dry them. She dried everything up so we would have them. Then on Sunday morning she would fry hamburgers. She would buy veal, pork and beef. She'd bring the meat home and grind it all together. So she'd make us hamburgers for Sunday morning breakfast, mash potatoes, and peaches. But I went to New York to work, I went to Baltimore. I worked everywhere to make a living. You couldn't get a job! So then I'd come home, then I went on the river. I worked in Baltimore at Continental Can. Yeah. But I was making no money. My brother lived in Baltimore, so I stayed with him."

Twila Kelly recounted the story of her family's life during the Depression and how her mother helped her get a job on the river. "My mother...it was during the Depression. We were as poor as church mice. My mother did everything in the neighborhood for other people. She shared eggs...she had chickens...she had eggs. She would swap rooster mares for a quart of milk. Mr. S____ when he would kill the pigs in the fall, he would give my mother a piece of a ham. She would give him eggs. OK? So that's the way the world went. So my mother got a job on a boat. She had three kids. It was me, my sister S____ and my brother D____. Daddy took care of us, she hired a housekeeper to cook. My mother was a cook. She worked on the boat, the first one she went out on was owned by Ohio Barge Line and it was called the *Monongahela*. It run from Pittsburgh, let's say Coal Valley to New Orleans. It was a big old steamboat. So the

war came along and I had got a job on the boat with her. I made one trip! I got married. I didn't work no more until M___ and D___ were a pretty good size."

"They were still small and the war was over, so in the meantime Union Barge Line was building new boats, big ones," said Twila. "When Union Barge Line got these big boats they was building, Ohio Barge Line sold their boats. They was big old fashioned paddlewheels. So they sold those two old boats. My mother got a job with Union Barge Line. There was no question about her going over there to go to work. They were the ones who came and got her! My mother was one of the best cooks to ever hit the lower river. So they couldn't get enough women to go to work on that brand new boat. So my mother took me and another lady named M___ C___ and she took the two of us on the boat with her. M___, her husband was in the Marine Corps and hadn't come home yet, she took M___ and me on the boat with her. If that wasn't a picnic! I can remember the captain, Captain C___ we had one mate on there whose name was...M___. Mind, that was in 1948!"

Each of the interviewees expressed a recognition of self-identity of growing up in a river community. Being born on the bank of the river, or recognizing each individual steamboat by its whistle was an ingrained part of growing along the river in a river town. Like the workers who preceded them in the earlier eras, life along the river was an inspirational part of their everyday lives. Many of the small towns along the Monongahela and Youghiogheny rivers had a mixture of ethnicities that played heavily in the development of identity as these men and women grew up in these communities.

That Mud is going to be in your Soul: Getting Hired

The Great Depression caused many men and women to seek jobs on the river. Life as a river worker was unique from other jobs such as those who worked in the steel mills, factories, or coal mines of the Monongahela Valley. The work was dirty, dangerous, and isolating for those on the boats. When something went wrong, the whole crew experienced it and through those moments a shared identity was formed. The men and women who held positions on the boats were never far from the job site, twenty-four hours a day for weeks at a time. When trouble happened at home, sometimes it took days to get there, if they could get there at all. "Everything on a steamboat was hard and tough. And people was hard and tough. That's why steamboat people got a bad rap because way back going to the Depression. Most people who worked on the steamboat didn't have no families or anything else, they was just roustabouts. And if they could get a job on that boat, then they just married that job because there was no other work no place else. And that's why they hung onto them jobs," Justin Wilson commented. He then went on, "Yeah. Like I said, after the Depression... I was just a kid during the Depression, they knew when they got on that boat they had three square meals a day, had a berth to sleep in, and they was going to get a paycheck. If they wasn't going to work on the boats they was bumming over on North Side or living in some fleabag hotel, working for peanuts. And them guys that's why they stayed right on the boat. Hell they worked thirty days a month, just like going across to China. Hell you couldn't get them off a boat."

When I asked Justin what the process was for hiring someone to work on the boats, he replied, "Well he [shore boss] was a guy that hired and fired and took care of

the stores and everything like that. He took care of the personnel on the river. On the riverboats....He was a captain on the river himself and retired there and they put him in the office.” I asked him how were some of the shore boss' attitudes towards new hires. Justin said, “... most of them guys were pretty good like J____ H____, see he was the head of Hillman... he took me down there to Smithfield Street in Pittsburgh, and he looked at me and said, 'How much do you weigh?' and this and that you know. So I told him. He said, 'Well you should be able to make it on the boat. I'll tell you what, we have a program right now.' This is when they started that there apprentice [program]. See everybody was going into the service back then, back in '41. Everybody was going into the service and they needed people on the river. So he said, 'How old are you?' and we just fibbed and said, 'Sixteen'. Well, my size and everything.”

There was no identification system back then. “No, we didn't have to show him nothing. He just smiled a little bit and said, 'You'll do!' So he explained it to me and said, 'I'll put you on the *Ranger*' that was the name of the boat, the *Ranger* they had (Figure 25). He said, 'I'm going to put you on there to be a sort of apprentice. You'll work six hours in the engine room and firebox. After dinner you'll work six hours on deck.' So whenever they went out to pick a tow up or go through a lock, the mate took me right with him and explained this, and watch everything he was doing. And when you're interested, it ain't too hard to learn, you understand what I mean? “

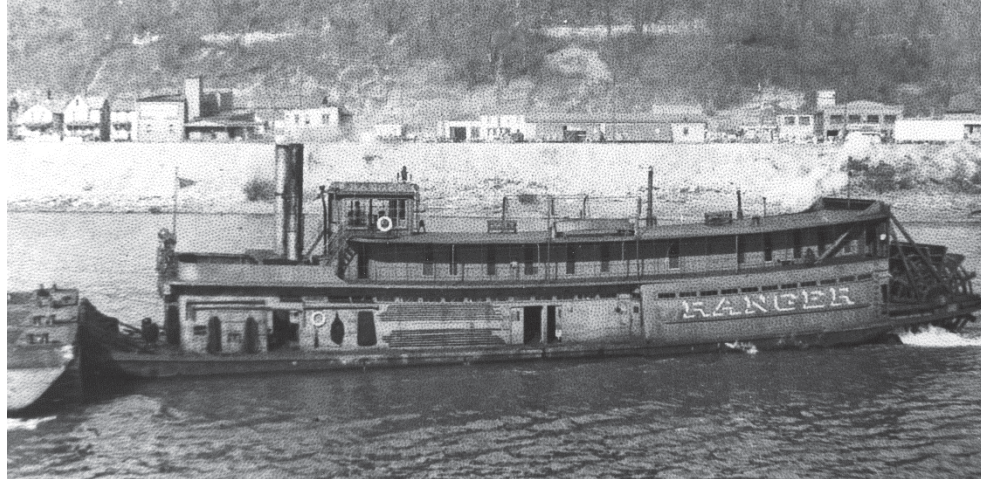


Figure 25. The *Ranger*. Photo courtesy of California University of Pennsylvania.

Justin Wilson remembered when he first went to get onto his assigned boat, the *Ranger*. “The day I was going down there to get on this boat, the *Ranger*, I had to walk through that mud,” recounted Justin Wilson. “Well, they had a guy down there painting the deck, J___ A___ was his name, the landing guy. Well you come down a pair of steps like so onto the houseboat. Well he had boards lying along there so you didn’t step onto the paint that he already painted. And he was bent down and he looked up. He was one of the nicest guys you’d ever want to meet. He looked at my feet. I said, ‘I ain’t going to tramp on you paint sir.’ He said, ‘Well I wasn’t talking about the paint. I’m going to tell you something. How old are you?’ Well I had to tell him I was sixteen. ‘What boat you gonna get?’ I said, the *Ranger*. He said, ‘Yeah, she’s coming up by the Yough River right now. Look at them feet! I’m going to tell you something. What you better do is turn back and go up that hill.’ I said, ‘Why?’ He said, ‘You see that mud on the soles of them shoes? Listen, you come down that ramp and get on that boat, that mud is gonna be in your soul. You’ll never get rid of that mud.’ By God, I retired off them boats! Some people he said, that’s what happens to them. If you like the river...you had to like the river to be on it.

And if you didn't like it, you wasn't going to stay much. It just took a certain type of people to stay there."

Greg Hall had a similar experience. "When you are going up and down there, and you watch the change of seasons, and you keep looking out and say, 'Oh, them trees are starting to get green.' You watch for spring and so forth. Then you go by a ballgame at night, and I'll be up there pulling ice, and I'd look over there at Charleroi and see the football game. That was life, that was my life. I remember this guy told me, 'Greg once you get started on these old boats you're hooked.' Something about that that keeps coming back. I know because I retired three times and went back."

Talbot Smith recalled how he started working on the boats. "Well I was about sixteen years old, they ran [steamboat] from Pittsburgh, Newell. S___ said my brother, 'you tell him to go down to Roscoe, or Coal Center and they have a bus or streetcar and get off the fifth and fourth and get off at South Side. You go see K___ R___.' So I did I went down. I went down using the streetcars, just like an old timer! So R___ told me that I'd worked seven days on and one day off. And he told me that the one day off, if it started at two o'clock in the morning it went till two o'clock the next morning. And that's when it started, if you know what I mean."

The Steamboat: A look at Work on a 20th Century Towboat

The steamboat was a complex technology requiring a large crew to operate in its daily activity. As mentioned earlier, a crew of twenty men and women was the average size necessary for the boat to operate efficiently. Each position on the steamboat played an essential role, and the crew members filling those positions had to be trained and ready

to complete their tasks in an often hectic environment. The positions that crew members held on the boats help form a part of their worker identity. Below are detailed vignettes of each position on the boats as described by the interviewees who occupied those positions.

The Deck Crew

Boiler Deckman

The boiler deck got its name because it was situated on the second level of the steamboat above the boilers. On this deck the licensed crew quarters, the cookhouse, and the unlicensed crew quarters were located. The boiler deckman served as a type of janitor. He was usually an older crew member who was too old to deckhand or work in the engine room. His duties were to keep the decks free of coal ash, keep the cook's stove full of coal (and the other various stoves), and to polish the brass fixtures on the boat.

Nolan Connor explained one of the duties of the boiler deckman. “Outside of the cookhouse, was a barrel and a [hopper] box, the boiler deck man he had to keep that hopper box full of coal. He would carry buckets of lump coal from the coal pile and take it down the deck to the cookhouse to keep the stoves fired.”

Talbot Smith was hired as a young man as a boiler deckman, probably because there were no other open positions on the boat. Smith recalled, “You sweep and keep coal dust off everything, you keep the outside of the boat clean. That was the janitor position. Well, we hauled stuff all over the boat. We would have to sweep the roof off at least once. Then the *BF Jones* was a new boat then (Figure 26). In the back they had the bathroom in the back. It went straight down over the wheel! [laughter] You get down there, you want to talk about Pittsburgh, get down to that bridge there...I can't remember it. Anyhow, you had to back, your steering was back you see. You back this way, you

back that way that's how you run the boat. But you'd get down there and someone would be back, back in the boat there [bathroom], that water would shoot right up! [laughter] But you talk about stuff coming out of there! Oh, man! Turds and everything coming out of there! “

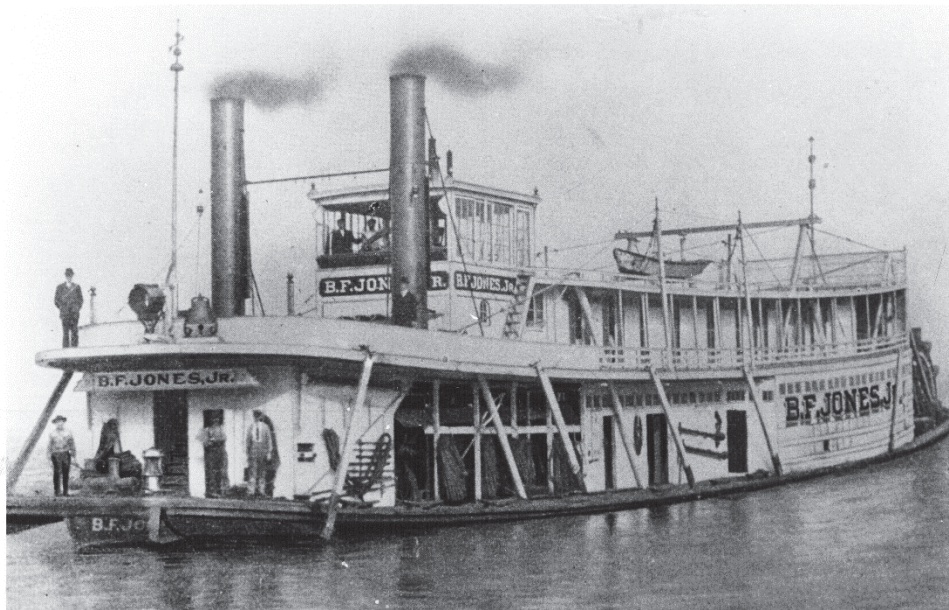


Figure 26. The *BF Jones*. Photo courtesy of California University of Pennsylvania.

“See a boiler deckman was another job on the steamboats,” said Justin Wilson. “They never had them on diesel boats. Boiler deckman he took care of that first deck, he took care of the cookhouse, stove, put coal back there, took ashes out. On the first deck, not the deck where the water is, that's the main deck. Next one up. See that was your cabins up there, your cookhouse is up on that deck. Well he hose that off every evening, the coal dirt and dust off. He took care of the cookhouse stove. They was all coal burning stoves was on them steamboats. Wasn't no fancy job. And he took the ashes out and kept the coal bins filled up. Then he took care of the pilothouse. He went up in the pilothouse, he shined the brass, washed the windows, swept the blowers, kept the pilothouse clean.

Took care of that stove. He was sort of like a handyman of sorts. That's all he did. He never had to go nowhere, only upstairs."

Coal Passer

The coal passer occupied to lowest rank on the steamboat next to firemen in the engine room. They were often young men who had just joined the crew and were starting their career on the river. The job of the coal passer was a simple one, but a physically demanding job moving coal from a "Fuel Flat" into the engine room. Normally a steamboat kept a supply of coal on the boiler deck in front on the pilothouse. On steamboats headed for the long trip from the Monongahela Valley to New Orleans, barges were tied to the side of the boat to provide extra fuel and negated the need to make many stops into refueling stations. Once the barge was affixed, usually alongside the steamboat, a ramp of wooden boards ran from the barge into the engine room. Coal was moved via wheelbarrow from the barge to an area by the furnaces where firemen shoveled the coal.

Justin Wilson describes the important role the coal passers played on boats heading south. He occupied the role for a short time on the steamboat *Campbell* and *Hubbert*. "Like if you went south on them shovel boats, or any kind of boat even a stoker boat. You carried what they called "fuel flats" alongside, right alongside the boat. They was smaller than a big barge, they might only hold well...a regular barge holds 800 to 900 tons of coal. That barge [fuel flat] was narrower and smaller, might handle about 400 ton. You kept that right alongside the boat. So you have all your barges out in front of you, this is one going south I mean, you had a fuel flat laying right alongside of the boat. You had a gang plank and a wheelbarrow, two wheelbarrows. You put this gang plank

from the deck down to the barge [flat], you took you wheelbarrow and set it there, filled it up and run up that gang plank. While the boat is going. That's all you did. You took that in there and dumped that coal right at where if he was taking coal off the bunker. You dumped that right there and that fireman would take that and shovel it in. Then if it was a stoker boat, they had a bin built on top of the stoker up so high. Would hold maybe two wheelbarrows full on each stokers. Most of them boats had two stokers. One on each side. They had a gang plank running straight across there, and the gang plank was no wider than that [motions with hands little over a foot wide]. And you wheeled across there and put it in this bunker or if you had to go to the other side, then you had to wheel clean across and dump it in that one. And that went right down into the stoker, the auger. That was a hard job."

Talbot Smith explains his duties as a coal passer on a towboat headed south. "Well coal from... You see when we went south; there was one barge full of coal you see besides all your other steel and other barges. [Demonstrates with hands that the coal barge for coaling is attached to the port side of the steamboat] So we had to wheel it from here [in the barge] to here by the furnace [boiler room]. And being as I was tall as I am now, when I was sixteen I do all the wheeling. And this was when wheelbarrows had steel tires before they had rubber tires ha! So the other guys kept filling up the wheelbarrow saying, 'hold on take some more!' And we get a pile about that high [motions with hands about three feet] in there [boiler room]. You'd sit down or go up and get coffee or iced tea and start again until your shift ended. A shift was six hours on six hours off. And when a new crew was coming on you had to have a pile of coal for them the same as they would have for us when we came on our shift. So that's what we do all

the way down to New Orleans. And then they'd have a crane come in there and put the coal on top, enough to get us going for at least three days. They put planks down there and you get down in there.”

Coal Management

“Well they had a barge right on the front of the boat or they’d still have a fuel flat,” recalled Justin Wilson in describing how coal was used on the boats. “They’d have to run that fuel flat out though. Most of them, they carried one right on the front of the boat. And he [flat] coaled the boat. Dump coal right down in that bunker at the front of the boat...you’ll see right where the bunkers were, right in front of the pilothouse, one on each side of the stairwell. They had that hoist right on the front of the boat. If you were going to make long trips down south. See they would only burn so much coal off the head of those steamboats because... I’ll tell you why. Say you get the front coming up and you take the coal off of her, then the wheel back here goes down in the water too deep and she’s logging. She ain’t rolling. See it cuts down on the speed. The kept that wheel ship shape. See them bucket planks was only so deep. And if you put them down too deep, then the wheel was working against itself. They kept it so she could roll free. Like they’d leave Pittsburgh and they’d only burn so much coal out front. Cause they didn’t want to use the coal passers and they didn’t want to get too much off the front end of her. Then you had places along the river, you know how far down you was going. Say, if you was going to Louisville. Well, you’d use more coal off the front the closer you got to Louisville because you didn’t have places you could re-coal right close to there. Most generally, they’d try not to use the coal passer until they got down pretty good. Cause they knowed how far they was going to go to another coal dock where they had a hoist.

Then the *City of Pittsburgh* and them, now this is good. There towards the end [of the steamboat era], they carried a little hoist themselves, a little clam shell bucket. A guy from West Brownsville use to run them. When he first went on the river, J___ L___ was his name. He coaled the *City of Pittsburgh*.”

Deckhand

Deckhands on the towboats had a variety of jobs from keeping lanterns lit to lashing barges together to form a tow. Many of these men were hired directly as deckhands, others started as striker-engineers and moved up. On the steamboat, the deckhands had their berths forward on the boat behind the cookhouse. They were assigned a bunk in one of two rooms that was kept clean by the maid. The life of the boat is in six hours shifts called the watch and the after watch. The crew except for the cook and maids operated on this time frame of six hours on six hours off. The shifts started at twelve in the morning to six in the morning and from six to twelve in the afternoon and so forth. Everybody had four six hour shifts. Towing barges was a twenty-four hour business. The boat and the crew had to work in shifts and work as members of a team. “I would sleep six hours, get up, go get a cup of coffee, and go on watch. The other guys [deckhands] go to bed. We had a top bunk and a lower bunk. You kept the same bed all week, you didn't changed them. That's what the chambermaids did, they kept them beds going,” said Nolan Connor.

Connor was a deckhand in the 1930s and 1940s. He started explaining his role on the boats by discussing the various dimensions of a barge. “I worked on the towboats. They aren't called river boats, they are called towboats. Barges are 175 foot long 27 foot wide and their gunnels were 6 inches wide, where you walked on. They all had cement in

them, from the beating those barges took they all were cracked. We were all scared of falling in. After the war 1947 they came out with barges with twenty-seven inch gunnels... [there] was two timber heads a quarter bit, a half bit, a quarter bit and a timber head on both sides. That's what the barges look like. Way out here they were made to carry a 1000 ton of coal but they only put 80 ton, 90 ton never a thousand ton in them."

The duties of the deckhand included measuring freeboard or the distance between the deck and the water's surface. "The distance between above the water, twenty-one inches, forty-five inches but you very seldom got that high. Most were twenty-seven, twenty-eight. That's all around the barge. What we did was took a port corner went up to the starboard corner (measurement). They were never satisfied. The companies knew how much freeboard the barges drew eight foot, nine and half-foot of water. If we got a barge that sat too low it would not go in this river, it was too shallow... Us deckhands only took the measurements. We took a rule measurements and yelled out "27 inches! 30 inches!"

Scott Hurst detailed the procedure once a tow was picked up from the mine. "When you picked up loads at the coal mine, the first thing you did... Now them tows were 525ft. long. You laid a two or three inch pipeline in 20 ft. sections. They had to be carried clear out to the tow. Cause all of the pumps were steam operated. And if a barge got to leaking bad, you didn't have time to lay the pipeline. It had to already be laid. So when you picked up you six loads from the mine, the first thing you did was to lay that pipeline up over the tow. You didn't have to do it with empties."

Nolan Connor gave a similar account. "There on the side of the boat are lengths of pipe. These pipes were used to pump barges! That leg of pipe went out three barge

lengths, that's all we had to go was three barge lengths. If the mate or watchman said, "we need a pump on that barge!" We would take that pump out and string these pipes together and hook them up to a steam line at the head of the boat. That steam line would start that pump running somehow. Pump the water out of the barge. It was a good job."

Deckhand duties also included keeping the steamboat's lanterns illuminated at night and in poor weather. "Well the deckhand at five o'clock had to take three lights out and walk out onto the head of the tow and there were steel hickies [hooks] out stuck in the coal to hang the lights up. After daylight he had to go out and get them. Then he had to clean them, and refill them with oil/kerosene."

Towboats transported a variety of materials other than coal. "Dravo Corporation had coal, gravel, and sand. US Steel had all coal. Hillman had all coal. Once in great while liquids. Once in a great while we'd head up to Star City with a load of gas and when it was empty we'd pick it up or someone would," Connor said.

Deckhands were also responsible for towboats with cantilevered smoke stacks. The railroad built many bridges too low over the Monongahela and Ohio rivers. This construction was intentional as the steamboats were in direct competition in the shipping business and hampering their efforts made sound business sense (Monroe 1992). However, towboats were fitted with stacks that were in two pieces and hinged together (Figure 27). The top part of the stacks had a long counter-weights that helped the deckhands pull them down when passing under a low bridge during high water. Connor detailed this work, "Every time there was high water in Brownsville under the bridge, you had sixty foot. OK another job for deckhands. They would go up on deck they had balancers on them (stacks). You pulled a pin on that and pulled a rope to pull the stacks

down to go under the bridge. Once we were out from under the bridge you had to pull them back up. It was a hard job that required four men. They're heavy. I've done it more than once.”

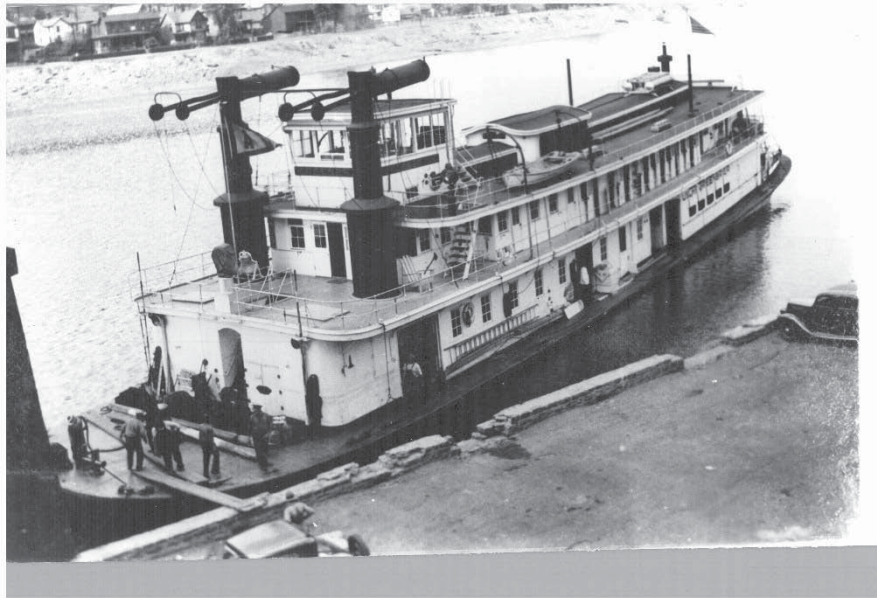


Figure 27. The *Green Brier*. Note cantilever smoke stacks. Photo courtesy of California University of Pennsylvania.

Talbot Smith described his work as a deckhand. “Fishing barges up, moving barges up. We hook them up and they had chains to chain each barge. So up here in the pools they had six barges, that’s all you took. Four of them would go through Lock #5 in Brownsville. Lock four of them in one side then the boat, and two of them would go on the other side. And they’d pull them barges out and put them over there...that’s how you made the locks in them days.”

Scott Hurst detailed his experience as a deckhand on the *Snyder*. “Well, you know, just making up the tows of the barges, lashing them together. Going through the locks in them days, the lock chambers were small. The Allegheny River took us four lockings to get that tow through the locks. That was at least a double locking, sometimes

triple. That tow we went from Neville Island to Lock #7, we were going to Lock #7 to work. You can't see it, but there is another string of barges on the starboard side, you can just barely see it sticking past that spud on the derrick. For that particular tow, when we left Neville Island, I would lay it on the lower guide wall. Cut the boat loose and go get that outside string and put them in the outside chamber. Then come back and take the rest of the tow through the land chamber."

The Engine Crew

The engine room was situated at the stern section of the steamboat. Often it had two large sliding doors on both the starboard and port sides of the boat. These doors were opened for ventilation especially in the summer when the heat from the boilers was oppressive and could be closed in the winter to hold the heat in. Often times the chief engineer left the doors open no matter the weather to provide fresh air. The steam was generated on the boat by large horizontal boilers. There were two types in use, the Western River Boiler and the Water Tube Boiler. Justin Wilson describes the two types used on boats on the Monongahela River.

"There was the Western River Boiler. That's a horizontal, they laid long ways. Your fire was in the front here. On the furnace, between the boilers is where you threw [sic] your coal and it had big doors. And underneath here you had a little door and a big bar, for poking the grate. You'd get in there and stir that up and that would get them hot coals, see, right up against the bottom of that boiler. And that would heat the water and make the steam. That's when them tubes like I was talking about went back through into them pipelines back into the engines. Water tube boilers your furnace was all underneath

it and above you had tubes. They might have been about [motions 6 inches] all the length of that furnace. Each individual tube had water going through it, made steam. They was a lot easier to make steam. A water tube boiler. And the western river boiler was on most of the old stern-wheelers.”

The engine crew consisted of the two chief engineers, four firemen, and four striker-engineers comprising both the Forward and After Watches. This next section describes the experiences of the engine room crews in their day to day activity.

Firemen

By the 1930s there were two types of steamboat on the Monongahela River, the shovel boats and the stoker boats. Shovel boats required four Firemen, two per watch, to feed the furnace and regulate the flues. Their job was hot, physically demanding, and repetitive in nature as they constantly shoveled coal into the firebox openings. The stoker boats had an auger that turned at a predetermined rate as the furnaces needed fuel. The automatic stoker eliminated the need for two firemen on a watch. Instead only one fireman was necessary per watch.

As a fireman on the towboats, Justin Wilson describes in detail his work at the face of the furnace. “[The] Steamboat, there was two [firemen] men to a watch. You had three big doors, one door in the middle. Both firemen filled it together. Then he had a big door and you had a big door. Then you had a wing door on each side. And that was the tricky one because of the way your doors was shaped. That wing door it was slanted for the side of the furnace. It had an angle. When you opened it up, you had to curve your shovel to hit that. Oh my, guys broke their wrists and everything trying to get coal in that thing. Cause they couldn’t hit it. You had to get it at the right angle. I did the same thing

when I first learned it. Hell I must have shoveled four or five shovel loads into the ash pan because I couldn't hit that thing. And they'd show you how to get it. "You got to tilt that shovel! Square away there!" A lot of guys couldn't shovel left handed. You know what I mean. If you right handed, and you take a shovel in you left hand, that's what you pick up with. Alright, if you was on that side over there and that angle was going the other way, you was in a hell of a position. You had to learn to do that. And that bar, when you put that in there, it went down so many feet and flattened out, like widened out a little bit. That was so you could lift your coals up and everything.

Then you had boards there and that would stop it like when they would dump coal in, it would only go so far. The pressure as you shoveled that out, would just settle and the coal would keep coming down. Now, when you got real low on coal, say you didn't get to the coal hoist, say it was 90 ton hoppers. Say you got down real low, where there wasn't much pressure there, that's why you took them boards out of there. Then you had to get back in there and get coal. Maybe even walk out and shovel it in."

Before he became a deckhand, Nolan Connor remembers his time as a fireman. "A fireman on the starboard, and another on the port side took care of four doors on the furnace and I took care of four doors on the furnace. You had a bar about twelve foot long. You put approximately fourty shovel fulls of coal in each door. You can imagine how fast that coal supply went down! You would put in more or less as needed. Anyhow you would take the rod and turn the fire over and take out your clinkers out of the fire. On the blind side there would be a set of blowers. You set the blowers off by pulling a cord to blow on the fire. The fireman in charge on his watch would watch his steam almost always 85-90 pounds of steam. He would watch his ropes for steam to make sure that

steam was coming into the furnaces. The other fireman would be standing on the other side of the boat. He was on the “blind side”, I don't know why they called it that. Anyhow he wasn't concerned with the blowers, he took care of when to turn your fire over. The engine was around, I think 25 horse power. The pitman's trap was a rod about 40 foot long and went to the center of the wheel.”

Greg Hall acted as a fireman in the engine room. “One fireman he was what they called a “gauge man”. He watched the gauge and would fire the furnace according to keep the steam up. When he get up the other guy got up. I had my period of hand firing, with a shovel. I had a heck of a time getting started with that because I kept hitting the edge of the furnace with the damn shovel! It took a certain technique to get that shovel and throw it back in there. Then there are certain periods when you take this splice bar [breaker bar] and spread the grates to get the coal up. Now there was running water underneath the boiler ashes and everything fell down into that and that flowed out into the river. That's the way they'd fire. Of course when you get a stopping bell you have to cut the steam right up there. Well as soon as they get a stopping bell, then we had what they called a bleeder and all that does is blow off the excess steam so it wouldn't pop! The pop doesn't hurt nothing but it was awful noisy. The pilot and captain didn't like to hear it pop. I would just open the bleeder and get it down to where I wanted it there. It was out beside the pilothouse up into the atmosphere.”

Striker-Engineers/Striker-Pilots

When Greg Hall was hired by the chief engineer on the *Allegheny*, he was placed in the position of a striker-engineer (Figure 28). “...in them days they called us striker-engineers, today most of them wouldn't understand the word oiler. Same thing. But we

were called striker-engineers.” The job of the striker-engineer was considered a skilled position and one to maximize learning. They were apprentices to the chief engineer to one day assume that role.

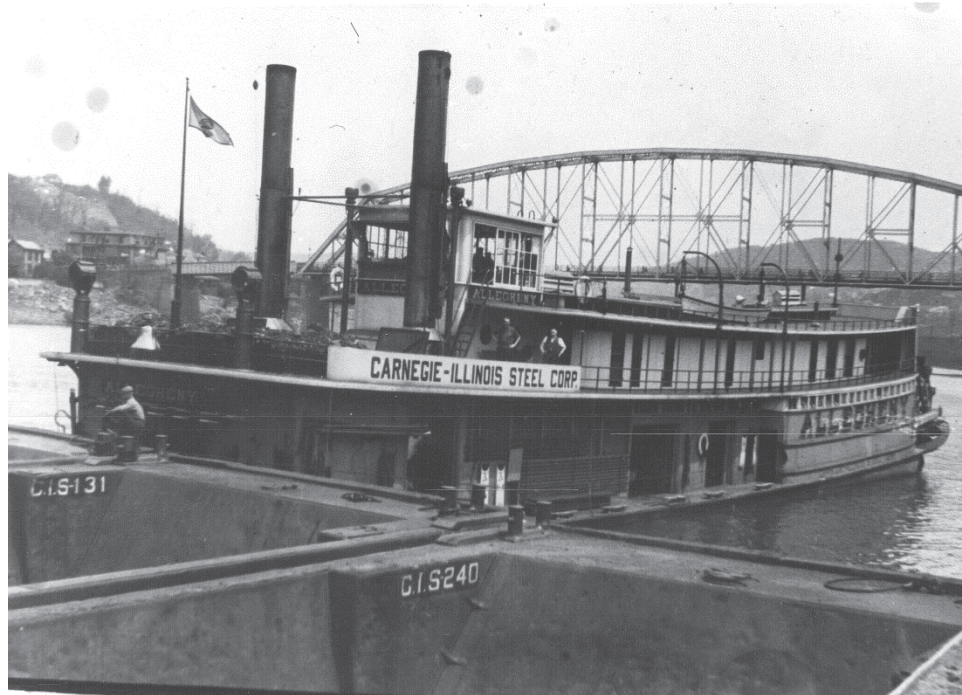


Figure 28. The Allegheny. Photo courtesy of California University of Pennsylvania.

Nolan Connor talked about the role of the striker-engineers. “...the striker also had to keep everything oiled, like the steam pump and its piston had to be. But anyhow he had to keep things oiled, he ran around with that oil can all the time. This pitman's trap he had to keep it oiled. So many little things. Always two men in there [engine room]. They were striker engineers. They were always in there. If one of them went up for a coffee, the other one stayed there. There was always personnel in there.

Hall had a passion for the engine room. He details his experiences there. “Of course the other was maintenance. These old time chief engineer or engineer they were or

most of them were fussy about their engine room. They came into a neat, clean, engine room they was proud of. And that was my job to keep it that way. I scrubbed the walls, I painted the pipes, I done all that. I'd get behind the engine while it was still running and wipe them all down. It had skylights, I'd clean the windows, I done all that. I shined the bands on the main engine. The engines were called tandem combine condensing. They were 700hp, and they had what was called a seven foot stroke. The pitman arm connects to the paddle wheel crank to the engine and that drives that engine. From the high pressure, the exhaust from that crosses over and runs the low pressure engine on the other side. And they was condensing and the steam instead of going to the atmosphere like they used to, they would exhaust it into the condenser. And it had a certain sound. [Greg makes a wooshing sound] A rhythm, you know. And you had to watch, a lot of times...there was nothing but tubes in the condenser as water flowed through to keep it cool. And that maintained the vacuum and everything else and clean water for the boiler. Because we pumped the water to the boiler from the engine room. We had a big feed pump. And some of these feed pumps were antiques. I know this one was a single action and had a big flywheel. A lot of times I'd be handling and that would hang up. When that hangs up you start to lose you vacuum. So I had to jump over there and shut the steam off and get on that thing and pull it on the center and grab the steam...it all became routine. I learned all that, and picked all that up."

"The chief engineer stood the forward watch, [and] the second engineer stood the after watch. They worked twelve hours a day. The chief was six in the morning until noon, then six in the evening until midnight. The second engineer took the other half. He had a striker, and the second engineer had a striker. And we more or less had...I was

competitive. I worked like a trooper to get that...I just loved the engine room! I'd do so many things, I'd paint and I'd do this, and I'd do that. We scrubbed the decks and painted them. Just a routine clean up. It was all part of the thing. There were certain days for certain things. There was around forty-nine brass grease cups where you greased certain things where they turned. They were shined every week. We shined all the brass, there was so much brass on them things. I had a certain day to do brass, a certain day to do this.

Yeah and you had to watch your water. If your water go too low, they had what they called a fusible plug, a zinc and lead mix. And the water would get below them, it would melt them and you was done. Then they had what they called a "Boiler Day" and me being a nice tall skinny guy, I had to take the head off of them tubes, they was called open tubes. I crawled back on my belly to get to the end there to replace a fusible plug. I had a rope on my feet and they had the hose on me at the time. So I get back there and take the old plug off and put the new one on. I'd say, "Get me out of here!" So they'd pull me out of there. I'd say to that second engineer, 'Now I know why you're so big and fat!' [He was] too big to get in the hole!"

Striker-Pilots

Striker-engineers could also be striker-pilots, or persons who were in training for a pilot's position but needed to learn the role of the engineer in order to gain a better understanding of boat operations.

Scott Hurst describes his role as a striker-pilot. "Okay, in them days on the old steamboats you stood your watch with the captain. He let you steer the boat and kept you out of trouble. If saw you was getting into trouble, he would take over...he had his pilot license but he wasn't ready to go by himself up in the pilothouse. You worked as a

striker-pilot until the captain told the office you was ready to go on your own. I worked as a striker-pilot all summer on the Dravo boats. So they had five different boats, I worked every one of them. They had the sand trade cause they had their own sand digger you know. And they had the Weirton Steel contract to tow coal from Buckeye Mine above Rices Landing to Weirton to the steel mill. So I got a lot of good experience. I was still working for the Army Corps of Engineers, I had got my pilot license. One of the pilots was getting ready to retire and was using his sick leave up. He would be off for a week at a time here and there. We had a fellow who was in charge of the boats was trying to make a name for himself. He would put me up in the pilothouse. Now the captain would go home and I would be there by myself. But he wouldn't pay me the money. He just kept me as a deckhand."

Engine Management

Little is written about engine management on the steamboats or how the workers interacted with the engines. The following section represents how Justin Wilson managed the engine. Much like those before him, Justin learned his trade by apprenticing with the chief engineer, a process that was handed down by word of mouth.

"You had a pin, just like a clock. Say you wanted 260 pounds of steam, you had to try to keep that up there. When that needle started back, say 255 pounds, that was time to do something. You're either gonna pigeon hole, you get that big old bar and stir that up. You'd do that a couple times before you had to fuel your furnace. So you'd pigeon hole and get that steam going back up, right up on that 260. Well about ten to fifteen degrees all total for all time. Like when you filled her up, you might lose about ten to

fifteen pound of steam, until that coal started getting hot again. That was your boss right there. When you was a fireman, you didn't have to worry about nobody, only that gauge.

Wouldn't take too much. I'd say...I've seen them [paddle wheel] start rolling around a 150 pounds [of steam]. Like you'd be tied up, and they'd have good heavy line, they'd start rolling her a little bit there and work the water out of her. Because the water would lay in the cylinders, the mains, cause when they cool down, the water would sweat like, you know what I mean? Then they would just work them real easy, you could hear them wooshing. They had little valves they opened up and you'd see water squirting outside the boat sometime. That's how, if they wanted to do it in a hurry.

Now like you're rolling up there at eighteen to twenty revolutions a minute, you're gonna beat hell...full. Alright, BONG, BONG, BONG, BONG [bell indicator], the first thing you do is grab that throttle! You throttle that baby down. And then you shift her up! Soon as you shift her up that wheel stops. She won't roll no more. When you shift her up to back, she stops. If you don't shift her up, that wheel with the current, will just roll slow. She'll slow down herself. But when you shift her up, see that engages her to start backing. That locks her almost. Then you just put the steam to her, if he wants slow bell, half bell, or full ahead. You're right close there. Either you or the engineer is right there. Because, you don't know, you know what I mean. Someone might pull out like a ferryboat or something like that.

You know they had...you might had to grease up once a watch...every six hours. And them each one of them valves used to go up and down, they had little holes in them, and you had an oil can with a spout on it, and put it into that hole and give them a couple squirts. Maybe two or three times a watch. That kept them lubricated. Then the slides,

where she used to come in and out...the piston, they had a grease thing there. It had a handle on it that you would work down every so often. Then you used to have to get out onto the wheel. The paddlewheel itself. Where the pistons go out and you'd see the arm [pitman arm] back there. It came from your engine...you had your big piston. That's the one that went straight. Then you had a coupling back here where your pitman [connected]. The piston itself was straight; it went in and out of the engine where all your valves and everything was. Then when you got out to the wheel, see, when the stern wheel itself came through there, it had like a big rod. And then this arm was onto this rod. Well where that pitman came out and met that arm there was all kinda brass that came from the wheel. Then this here pitman had brass on the bottom and brass on the top [describing a bearing sleeve]. Then you had a thing there, what you called a Key Down, in other words, as that was running all the time, sometimes they would get a little loose or something, and you'd have to get out there every now and then and work that key down to get them tight again. There was a grease fitting in that too. Oh, it worked so nice! See I did that when I was on the *Colvin* and then, the *Snyder*. Then I run striker every once in a while on the Ranger. I learned all that. It helped you out to get a job, like on that bell boat, old C___ R___, their guy from Pittsburgh that run the Crucible boats, he couldn't find guys who could answer bell boats. You ask old Greg Hall, even a lot of engineers couldn't answer them bell boats. There was no indicator or nothing to tell you. You had three bells. A big bell was a stopping bell and a full ahead bell. She'd go, BONG, BONG, BONG, BONG, you could tell the difference in the sound. Then a middle bell, it would go BING! Just one ring, that was you half ahead bell and your ship up bell. Then you had another bell, it was a little jingle bell. That was called a slow bell and a chestnut bell. Say

you was going up the river on the Snyder, you're going full ahead. And you're walking around doing things and you hear this Bong, Bong, Bong, Bong! That captain wants to stop. See, he's ringing the bell from up there. Say something is out in front of him and he wants to stop. So he rings that. If he's going to back, he'd go BING, that middle bell. That means shift your engines up because you're going forward first, then when he rings that BING, you shift that up and start backing. Well he rings that bell to say shift up, you BING her. If he wants to back her half head, he BINGS her again. You learn that when you are doing that all the time, you know that guy in the pilothouse, almost how he works if you work with him very long. That bell has two or three meanings."

Engineer Greg Hall remembered how the communication system between the pilothouse and the engine room worked. "Then we got a telephone in the engine room and then before they had what they called speaker tubes from the engine room to the pilothouse. You blew in that thing and it would whistle up in the pilothouse. 'Yeah?' I'd tell him so on an so. But after a while we had a phone. I used to have fun, because I used to smoke a pipe. I'd get that speaker tube [blow smoke into it]. I'd fill that tube up with smoke! I'd get a big puff. 'What the hell are you doing?' I say, Why? I don't smell no smoke! He knew what I was doing."

Licensed Crew

Engineers

Engineers were part of the licensed crew along with the captain, pilot, and mate. Their job was to keep the boat moving. During the steamboat era the captain and chief engineer could hire and fire crew members. Engineers had their own world inside of the

boat, the engine room, and it was their job to keep the machinery running at peak performance. Engineers, like captains, could be benevolent dictators on the boats, handing out both praise and a myriad of harsh language in an instant. They were often well educated in mechanics, steam operations, boiler maintenance, and arcane safety. Their license was earned through written tests and practical knowledge of engine room operations as dictated by Coast Guard regulations.

Greg Hall eventually was promoted from striker-engineer to chief engineer. "...all came under the district of the United States Coast Guard. It was all under their jurisdiction, federal and they all had to comply. My captain had to have a license, pilot had to have a license, the engineers had to have a license and the mate. This is after you had your time in."

When asked how a person became a chief engineer, he replied, "Experience. We worked there and after three years you got three letters of recommendation from the engineers you worked with, I got a recommendation from a captain, and you went to the Marine Hospital and you took a First Aid examination to pass that, then you went to the Coast Guard and you worked out math problems this is preliminary to taking your examination."

Greg Hall and Justin Wilson were the few left on the river who could operate a steamboat by the "bells and gongs" engine orders instead of visual engine order telegraphs. In these earlier boats, the captain pulled a rope that was connected to a series of bells or gongs. There were no visual indicators to tell the engine room crews what needed to be done, only sound. These boats became known as "bell boats" and only the older generation of engineers knew how to operate them efficiently. By the late 1930s,

most boats had visual type control telegraphs located in the pilothouse and a sister indicator located in the engine room. The captain moved the indicator lever to STOP, STAND BY, AHEAD (SLOW, HALF, FULL), FINISHED WITH ENGINE, ASTERN (SLOW, HALF, FULL). As the captain pulled the telegraph lever in the pilothouse, the sister telegraph moved into the same position instantly. Striker-engineers or the chief engineer immediately began manipulating the engine control cocks and throttle levers to answer the captain's orders.

“We had gauges and we had a big indicator that hooked to the pilothouse,” Greg Hall remembered. “They’d ring it over there for ‘Slow Ahead’; ‘Half Ahead’. There was ‘Stop’; ‘Full Ahead’. That’s the same thing as the indicator in the engine room. You’d hear that. I’d hear the bell rung over ‘Slow’. I’d run over and cut down on the steam. It was all steam operated, nothing else. And ah, the first thing they want to teach you, is how to handle-operate. In case they get a bell, they want to get somebody that...I could go there and stop the boat, answer the boat, or do all that. I was trained for that. Of course when you get a stopping bell you have to cut the steam right up there.”

Justin Wilson recalled when he was hired to work on the *W.H. Colvin*. “So I went on that *W.H. Colvin* and that's where I learned to answer bells and stuff. He took care of me, otherwise them old engineers wanted a guy who knew how to answer bells. But there weren't many of the guys around because many of them boats were indicator boats.”

When new engineers were hired to work on the bell boat, often it came with a high learning curve for them. “Wilson recalled when new crews were introduced to the bell boat. “Well there was two with you. Then a new engineer and a new striker would go on watch. See that’s the way it was. He had a guy answering bells for him too. But that

engineer might know how to answer them because he was already on that boat. But a lot of new guys if they come from J&L or US Steel or Hillman or somewhere, and they were put on a bell boat, they just couldn't do it. Hell I've seen guys jump straight up in the air when the bells would ring. They didn't know what the hell to do! Well hell, that captain up there is banging them bells trying to get them to stop!"

Mates

Unfortunately I did not have the opportunity to interview anyone who had worked solely as a mate on the steamboats. However, Talbot Smith spent three years as a mate. "I got [out of] service of in '45. I went mate then, I was just a mate for about maybe two years off and on, if they needed me as a pilot then I'd pilot, then I'd go back to mate. If they needed me sometimes I'd even go back to being a deckhand. Well you know he's [mate] the second-in-command, there are pilots then mates. You take care the boat, you're in charge of the whole boat, the mate is. Captain is too but the mate is the one. So back in them days you had to make sure everything was, well those old steamboats you could eat off the deck."

The mate was like a sergeant in the army. He was in charge of the deck crew and stood in charge of either the Forward Watch or the After Watch, while a competent deckhand stood the opposite watch as the Watchman. Mates were the trainers of the deckhands in their duties and were part of the licensed crew with the captain, pilot, and engineer. Mates on steamboats had a surly reputation of harsh language and harsher punishments. Mark Twain said of mates, "they could string together expletives that almost could be mistaken for poetry" (Twain 2001).

Scott Hurst remembered the role of the mates well. Some mates became legendary on the river for their harshness. “No, but it was rough on the boats because the mates, some of them were bastards. They would knock you on your ass if you gave them any lip. And if you hit them back, striking a licensed steamboat officer was a federal offense. You could go to jail. Oh yes! My uncle was a deckhand on the Carnegie-Illinois steamboats when the war started. He went to the merchant marines. When he came back, to claim his job back, they were going to put him on a boat with a mate named S____, I believe. He was one of the meanest mates on the river. My uncle said no, he wasn’t about to work with S____ again. So he quit and went into the steel mill.”

Mates kept the deckhands running on the boat and handed down orders to from the captain. “Now we went out of Palmer docks [with] a mate, deckhand, deckhand, and myself, that's three deckhands and a mate, went out to pick up a tow. It was raining cats and dog tails. We came back off the tow soaked. Water was squirting out of our shoes. He [captain] said “Sir” to the mate. The mate got orders and gave them to us,” said Nolan Connor.

Captain/Pilots

The pilothouse sat high above the rest of the boat overlooking the main deck and offered the captain a 360 degree view of the river and surrounding shoreline. On many of the steamboats, the front of the pilothouse was open with only “brush boards” used to protect the occupants from the weather. These boards acted like louvers that could be placed closer or farther apart. The captain and pilot had rooms across from each other and their own bathrooms at the forward section of the boat.

At the helm of the steamboat were the captains and pilots who navigated the vessel and guided them through the many locks and dams on the river. These men during the Late Steamboat Era had worked their way up from deckhands and engineers to finally take command of their own boat. The captain was the absolute authority on the boats prior to unionization in the 1950s. He had the ability to hire and fire personnel on the boat and set the general work pace. He used the mate to carry out his orders to the deck crews and to dole out punishments.

Justin Wilson detailed the captain's duties. "All the captain did, was he was responsible for the boat, the payroll, the crew. He fired or hired, ordered stuff for the boat, he run the manifests, all that kind of stuff. Did the same job, steering and picking up tows and stuff. But he had this extra stuff to do."

Pilots were captains in training. They were usually given the After Watch to allow them to hone their skills maneuvering the boat at night. Many pilots also served other roles on different boats. A worker could be called to pilot a steamboat for a trip and then told to go back to working as a striker-pilot or mate. The end goal of any pilot was to take the examination for his license and be promoted to captain.

Scott Hurst remembers his experience learning to become a captain. "It took me five days to get that license, one day of going in and taking the physical and first aid test and paper work done. It took me a full four, eight hour days of writing. For the First Class Pilot License you had to write everything out. It would ask you questions. 'If you were going down the river at Emsworth Lock and all of the lifts were up at flood stage and you had six loaded barges of coal, how would you get into the lock?' Well the right answer would be to 'flank it' not to try to steer down. You had to write all of that out. You

just had all kind of questions like that. You had to know all the parts of a boat, the steamboat. All the parts of the paddle wheel and all that. You had a lot to learn. Then for the First Class Pilot License you had to draw the river for where ever you wanted you license to run. Put every sand bar in, every bridge, and the horizontal and vertical clearances down to a tenth of a foot. I mean you had to do a lot of studying to get that license...you had navigation charts and that. Books...the Coast Guard issued the books with the bridges and that in. But like I say, it took me a week to get my pilot license.”

Steering a Steamboat

“Steamboats your had to use you wheel, your paddle wheel to turn,” said Talbot Smith. “You turned them, but you couldn’t really turn them. You had to back around to go around a bend...The boat, the paddle wheel was going back...reversing it. Then you turn your rudders the other way. You had big rudders down there. You might have to back up three times to get around a bend. In other places...you’re leaving Brownsville, you get to the lock there. And you get down to the Red Line. You have to turn left, you steer for that bridge but you can’t steer enough, so you have to back it around. After you clear that bridge pier then you can get your front end going. I left the bend at Newell, that’s the biggest bend on the river. And to get around there...that was the thing every captain and pilot wanted to make that [turn] with one back. One captain said he made it with one back, but no one ever saw him make it. [laughter] I’d always take two backs, cause over in there are big, big, rocks you know. You’d hit those rocks with the barges and sink ‘em you know?”

The Cook/Maid Staff

The cooks and maids on board the steamboat were in a class altogether different from the deck/engineering crews and the licensed crews. They were mainly women, they followed a different work day than the rest of the crews and often were not the subject of the captain's or mate's wrath or display of authority. In a period when other industrial workers were often segregated based on race or gender, the steamboat crews were highly gender integrated and allowed women the option for travel unlike any other career. While there were some physical and regulated separations on the boats, women were viewed as an integral part of the overall crew. Maids otherwise known as chambermaids, had either the forward or aft sections of the boat to clean.

Twila Kelly recounted her duties as a maid on the steamboats. "I worked in the kitchen. There was no such thing as a dishwasher. I had to wash dishes for twenty men. That was on the Monongahela. I worked in the kitchen with my mother. M___ she took care of the dining room and so many of the bedrooms and the other girl, she had so many bedrooms and had to help in the dining room, that was their jobs. And then at night, the men would take their baths or whatever they was going to do, throw all their dirty clothes in the wash. The next day the laundry lady had a pile! Their sheets were changed every two days. We had to wash all of their linens up. Women were separated from the men. We had [our] own quarters, our own sitting room, and at night if it was down south, it was warm. We would take our cup of coffee and at that time everybody smoked. We'd take our cigarettes and up the deck we'd go and watch the world go by! It was pretty down there at night!

We worked from 5:30 in the morning until one o'clock," Twila recalled. "From one o'clock until four, we could go to bed. Then we got up, got supper on the same schedule, five and six. At seven o'clock we was cleaning up the kitchen."

"I got up at 4:30 in the morning. Breakfast was started. The first crew eats at 5 or 5:30. While they was eating, the other crew was cleaning up to take their place. So when they went out to take the job over, this other crew came in and took over the place where they sat. We had to reset the table and everything. Feed them and they'd all go to bed. So you worked six hours and were off six hours."

"Ohhh my goodness!" said Sofia Kowalski. "I used to get up at three o'clock in the morning, set the table so the cook wouldn't have to you know... [She'd] say the guys are coming to eat. They changed watches at seven o'clock. I'd have to have everything ready; have the tables set and then go on to work and go out there and clean the rooms, so when the hour watch came in there their ready to go to bed. See but I kept the quarters of the captain's quarters. They always gave me the captain's quarters to clean. They said I was very clean. I kept the rooms real clean, scrubbed the walls, windows, floors. They all said that I kept their part of the boat clean."

Anne Novak describes her work as a maid on the steamboats. "The women on the steamboats, like the bedroom area was on the front end of the boat, where the captain and the pilot had their room and the engineers. The deckhands and the other crew were at the back end of the boat. We used to hang clothes out the back [fantail] we didn't have a dryer. So we had to hang them out on the back.

Nolan Connor detailed some of the maid's duties on a boat he worked on. "We were in bed every 6 hours. This guy is on the front watch and he would get of bed. She

would have to hurry up and make his bed. I would go to bed in a different bed but in the same room. We had a top bunk and a lower bunk. You kept the same bed all week, you didn't changed them. That's what the chambermaids did, they kept them beds going. If you would happen to leave a stinking or dirty sheet, when you got out of bed and tell the chambermaid that you dirtied your sheet last night and she'd say, "I'll fix ya." and put a clean sheet on your bed. But you'd have to tell her. Normally you would use that sheet for 10 days if you didn't stain it or anything. You know how you can stain a sheet with you know, your backside."

Once in a while we had to peel potatoes, you know help the cook with a couple of things. But nothing to do with the cooking, she [cook] did it all. Bunk beds in the rooms for the two girls and the cook had a separate room for her with an adjoining bath, you know, a bath in between, actually showers

After supper, the time was yours. Of course, you're on there and you can't go anywhere. After breakfast we did the dishes. Cleaned rooms, make beds after each guy got of his bed, we'd go in and make his bed, the other one would come in. It was like bunk beds. Even the girls had bunk beds. You didn't have a whole lot of room in them! She [cook] would dish it up and then we would set it all out on the table whatever she had. She'd make a plate of eggs and a plate of bacon for breakfast you know, there was always fruit, cantaloupe or grapefruit. We girls had to cut around and slit each grapefruit."

Working conditions were not always great on the steamboats as Sofia points out. "Then we had the bucket on the stove, the garbage bucket. Dump it out into the river. Everything in the river! We went down south one time and Captain S____, he said, 'Sofia,

when you change the beds, you throw them guy's sheets into the river.' I said, Why captain? He said, 'They've got gonorrhea!' What! At New Orleans they got sick. I had to change their beds and throw their sheets in the river. He said they got set up. Yeah. I said, Well OK captain! But everything went into the river. When I first started, in 1940, we had to take a shower from the river water. Make coffee from the river water. You put milk in the coffee, it turned purple. The cook cooked everything in river water. We didn't die. So you see what we went through? Everything was from the river. Then they started making distilled water. It was hard. That was hard work. Work conditions were bad. When I got on the old *Shannopin* , and the old *Vulcan* they had roaches, bed bugs. Then we got rid of all them. That's why I say it was hard work."

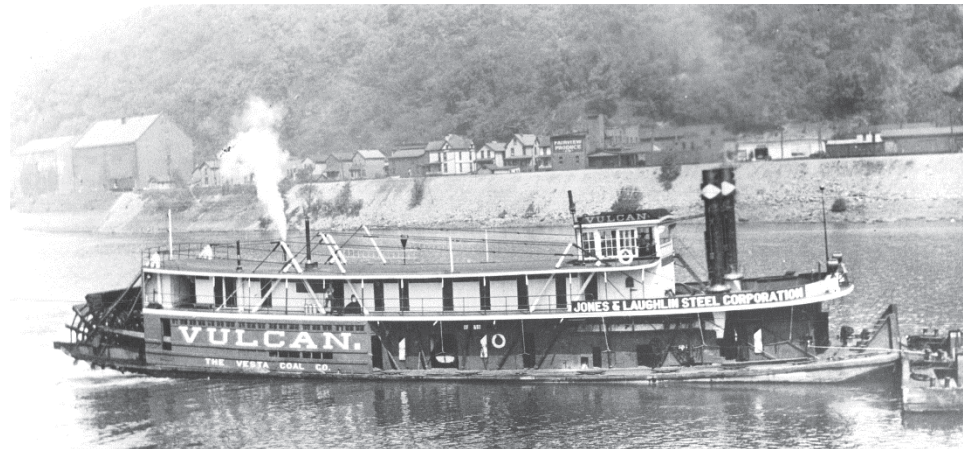


Figure 29. The *Vulcan*. Photo courtesy of California University of Pennsylvania.

Crews on the steamboats were treated to three square meals a day plus coffee and snacks while on watch as long as your work was completed. Twila described some of the food for breakfast. "They had pancakes, sausage, eggs, hot cereal, whatever they wanted, they got it." A worker could put in a request for a meal. Twila continued, "The night before. And the cooks asked who wanted what and that's how she cooked it."

Talbot Smith recalled the meals on his boat. “My boat made the best cake. Every Saturday night you’d have steak and it was about [motions with hands] that thick and that big around. You had, every meal you had two meats and four side dishes. Every meal, breakfast, dinner, supper.”

“The cooks, the food was excellent!” said Greg Hall. “It was a big coal furnace. They burnt coal, they did have gas. They done all their baking, cooking, everything right there. And it was delicious! It got so when they baked bread, I get to ask the cook to cut me off a fresh heel and I liked the heel the best. In the meantime, we had an ammonia compressor that that made the ice for their storage. We had packs of ice. I had eight cans that I had to shake them upside down pound on them until the ice fell carried that cake of ice in and stack it in the refrigerator. I done that every day and made ice. We had what they called a ten minute break. The engineer would let you come up and make a sandwich or something like that. And if you’re up there and stayed too long the lights would flicker and you better get your butt back down into the engine room!”

Justin Wilson talked about his experience with food on the steamboats. To Justin, coming from a poor family, the food served on board was extravagant. “The best there ever was! As much food you couldn’t even get rid of it! When I first went on there M____, like I said, I came from a poor family. My grandmother raised me, thirteen or twelve kids. But I wasn’t that poor that I never knowed what it was to be hungry. But, we never had very much. But anyhow, when I went to that supper table, that crew all came in and sat down, you know on the *Ranger*. That table would be I’ll say from my table to my sink long and about as wide as this table. And you had people sitting on this side, that side. Captain at the end of the table and the boiler deckman at this end. And you had your

two deckhands and your mate. On the other side was your fireman, your striker, and your engineers. They brought platters out there M___ loaded up with pork chops, loaded up with steak, just depends on what meal you had. The meal you had in the morning, you would either have sausage and pancakes one morning, the next morning it would be bacon. But you always had your eggs; fried eggs, boiled eggs, any kind you wanted. You always had a dish of like prunes or apricots, or something like that. You had milk, butter milk, no pop or nothing. Everything and that, and they did their own cooking on the steamboats. I mean their baking and everything. Baked their bread, baked their pies, oh my! You just couldn't imagine just how much!"

"Breakfast if there was anything left, over we generally threw it overboard for the fish," said Nolan. "Dinner or lunch the leftovers were sometimes held over for supper. Supper was at 5:30 pm and lunch was at 11:30 am. Midnight didn't have a meal it was put out and you fixed your own. Sandwiches etc."

The women who worked on the river often times had to endure their roles in the communities they lived. Justin Wilson gave some insight into how the women were viewed off the boats. "But I have to say another thing, them women got a bad rap, I don't care where you're at or what you're doing, you could be here, have a neighbor right there and they could be the worst person in the world. But they put a lot of good women on the river. Soon as a guy knew she worked on the boat, he'd say, 'She's a tramp!' That was a shame because there was a lot of good women on the river. Especially when they started working ten and four or ten and five, you know what I mean. They had nice homes and got married and stuff. Like that C___ D___ there, no one in the world that would ever say a word about her. She was married and had one boy."

Race and Ethnicity on the Steamboats

One of my interests when conducting these interviews was to understand how race and ethnicity had translated from the packet days into the towboat era. African Americans had played an intimate role on these vessels. The crews of the towboats of the 1930s and 1940s looked similar to their 19th century counter parts. What had been different between the towboats and the packets was the racial diversity that was present on the large passenger boats. The packet steamboats on the Monongahela River often had African American servants and firemen aboard. Their manual labor, dubbed roustabouts were often blacks who worked carrying freight and hard labor on the decks.

When asked about African Americans on the steamboats, Talbot Smith recalled. “Not on mine but there were some on the US Steel [boats]. Firemen, they had them as fireman. You know they would shovel coal, they had a couple of them. Not many. We’d have to go in, or go pick up a barge, and they’d be on the inside [of the steamboat]. So I was outside hollering at the deckhands, and I said, 'Get on that second barge and pull it out. Use the nigger line to pull it out.' The nigger line was just a rope used to pull the barges in and out with. Oh, and I said that without realizing the people [African Americans] on the other boat, and they went scrambling.”

Justin Wilson said about blacks on his boat, “Nope. Them guys was all gone before I got on the river. Carnegie Illinois Steel used to have them, I mean US Steel used to have them when them boats went south. They had colored firemen. We did coal passers and stuff, but they had colored firemen. The *Thomas Moses* and that's another thing. On them boats, the *Thomas Moses*, like the *James G. Lowe* she used to be the *William G. Clyde* then, the fireman [black] slept back in a room and they had their own

table and everything back there. They ate right in that room. They didn't go out to the table in the dining room and eat with the other people.”

“Well that was back them days during segregation, said Wilson. These were black firemen that's what I meant. You wanted to know about ethnic groups. Some of them, they had black firemen on them and they ate right in their own room and everything. That was on them old stern-wheelers steamboats of Carnegie and Illinois Steel, when they went south. But up here in the pools they didn't use them much. But I think the *J. H. Hillman* used to have some black firemen on her when I first started.”

“I never seen a black on deck. I seen a few black landing men. But as far as working on a tow, I never had to work with any of them. Not that I never had anything agin any of them, but I just never. One time they sent a colored deckhand to one of the Pittsburgh Coal boats, and he only lasted about a day. I don't know what happened, I wasn't on that boat. I don't know what happened or anything.”

Greg Hall had a similar story about where African Americans slept on the steamboats. “They had their own room. We were all back aft. They had a double room there, because there were four firemen. Two sleep at a time because the other two would be firemen.” Hall continued, “But no, they were happy, no problem, no segregation, none at all.” Unfortunately, Hall described a very segregated working environment on the towboats.

Scott Hurst put it more bluntly. “The only blacks I ever saw on a steamboat, the Crane Brothers were a fly-by-night outfit. Like Zubik. So Crane had two colored firemen. They ate at a card table in the kitchen, they didn't eat with the rest of the crew. The only two blacks I had ever seen.” Hurst added a story about a black electrical engineer who

worked for the superintendent. “We had a black electrical engineer in the office. And he was a good guy, a hell of a nice guy. For years he wouldn’t eat on the towboat because blacks never did that. And I heard that superintendent call him everything but a nigger.”

Racism was prevalent on the steamboats with African Americans as firemen and coal passers. Just Wilson said he had never met a black mate because mate's were licensed crew. Upward mobility then was stifled for blacks and their lack of presence on many of these boats may be attributed in part to racist practices of hiring and promotion.

When exploring issues of race or ethnicity on the boats, Nolan Connor put it succinctly when asked about immigrants or blacks working on the boats, “You mean foreigners? No. They were from every place all over the Monongahela Valley, like Rices Landing, or like me from Brownsville They would not hire anyone who could not speak good English or a colored person. Now they can't refuse.”

Twila Kelly who was working on the diesel boats recalled, “We had a lot of ethnic people, but never any dark skinned ones. Didn’t see the dark skinned ones until 1965. Then you started to see them. Some of the other boats up here may have had them, but down south, no. I’ll tell you what, you never saw any black ladies nowhere.” When asked about deckhands, she replied, “No, no. Never seen one.”

Dangers and Downtime

“I almost damn near lost everything!”

Steamboat life was dangerous for the crews working on the river. An accident, no matter how minor could be life threatening due to the isolation of the boat on the water, and the few places where emergency crews could gain access to the injured worker. Locks and dams proved to be easiest places to unload the injured and the few places that had a telephone that was accessible. If the captain or pilot made an error while entering a lock, the whole boat was put in danger, not only those who worked on deck.

Sofia Kowalski remembered a time when high water caused almost a total loss. “Yea, I know when we went to Lock #3 and we had high water, pulling. So one of those guys came and said; 'Hey girls you better put your life jacket on!' I said 'Why?' 'I think we're gonna go over the dam!' OHHHHHHH my god I said 'I can't swim!' so this girl she's from Denbo, I___ B___. She said 'you can't swim I'll push you in!' but I put a life jacket on me you know.”

Justin Wilson recalled a story he had heard from a fellow riverman. “...they put so much coal on her [*Aliquippa*] down there, and they had a big river [high water], and she was narrow. She wasn't wide and she didn't have pontoons on her. She was more a narrow boat and high. And when they went to back her around, she had so much coal on her they put boards across where you go up the forecastle from the first deck up toward the pilothouse. They put boards across there and they put coal all across there too, see. Clean back to the where the line house was right in front of the pilothouse. That was a lot of coal! Well when they went to back her out of there, and that current got her, she started

bouncing this way [rocking motions with hands]. When those boats back, the pitman...they roll with the pitman more or less. Well that current got them broadsided and they rolled her over. They sunk her!"

Wilson continued. "They lost a chambermaid, and an engineer I think. Got drowned on her. Cause a lot of people was still up town while they was putting coal and everything on. There wasn't that many people on her just the working crew itself, wasn't no body in bed outside of this here one engineer. He was sick they said. P___ told me. And the chambermaid was a young girl who was on her first trip. And she had her pocketbook in the room, P___ told me. He told me he told her to, "Come on!" And she said, "I got all my money in my room!" She took off. Well she rolled over. And P___ and them had life preservers on and I guess they got out. They rolled her over right there. She was upside down P___ said. Well, he lost his mate's license for two years, old P___ did. And that B___ J___, that captain, he lost his for two years. He wasn't allowed to go back on a boat for two years" (Figure 29).



Figure 30. The *Aliquippa*. Sunk at Unknown Lock Wall. Photo courtesy of California University of Pennsylvania.

When I asked, what was one of the most dangerous events of his piloting career, Talbot Smith opened up with this account. “Very dangerous. I almost lost damn near everything, I mean, I was just a green pilot, you know. So I went down, we went down and the captain went to bed about two ‘clock. So we got on load and two empties. So we got the load in there and there is a seal on the lock, the ice had piled up so bad that it had just stopped it right there. I could go either way. I couldn’t go back, I couldn’t do nothing. I was trying, trying, you know? No way to go.”

“But anyhow, here I am underneath all these barges,” said Talbot. “And I’m trying like a fool and the boat isn’t doing nothing, just going back and going back. And like I said there are things on the lock that you couldn’t get a boat underneath there. The only thing that happened...well, I rung the alarm right away as soon as it happened. The captain came running up there and he didn’t take over. He said, well of everything he

said, 'boy I sure don't like this Talbot' And I said, 'Boy this ain't doing me good!' So I hollered down and said, 'Hit the axes and cut the wires!' And they got the axes and they cut. Boy when it [the tow] came around there I was at full ahead, you know and I wasn't up there far enough and I knocked the corner out of that barge. It kept going, and those barges went right over the dam! And I got up there, and there are the bosses standing up there in the lock. He says, 'You made it huh?' I said 'yeah.' 'Anybody hurt?' he said. Holy mackerel! I could have drown, everybody could have gotten drown! We might have all got blown up with steam! You know what I mean, you could have got underneath that lock."

Justin Wilson recounted when the on *Mongah*, the captain's quick decision saved the boat and crew from going over a trap dam. "One time we was going down there, a guy from Dravosburg, Captain H___ S___, he was a rough and rowdy kind of guy. He was a good pilot. We was on the *Mongah*, and we left Montgomery and here we didn't get the message at Montgomery that they was working on Lock #7, they was throwing the dam down, you know, because the river was raised. Well they had that maneuvering boat out there and all, well, about say maybe four or five barges wide from the other side of the river, there was a pier set. And that's where some of them anchored onto, that came from the lock wall over to the shore pier. Well they was over there putting that other part down first, so the water would go through there. Then they would work their way back over. Well we didn't know, they used to put a light up. They put that white light up, that meant they was throwing the dam. Well hell, it was only about six miles from Montgomery to Lock #7. That first trap dam at Midland. Well here we're coming down there like a bat out of hell with four barges and high water on the *Mongah*. And old H___

came around there and throwed that headlight out there and he said, 'Holy hell!' He started backing her right now, you know. He said, 'They're throwing the dam!' Man I mean we're flying! I said, 'What in the hell are you going to do H___?' He said, 'Well we're going to have to go down through that bear trap. I ain't going to kill nobody on that pump boat!' So that space was there, maybe about five widths, four or five widths wide. He said, 'Go down an loosen all of them face wires up so they're loose,' He said. 'Because we go through here there is going to do some bouncing!' He had that much sense, that quick. So went right down there and loosened up those face wires and everything else and he had to take her down there through them bear traps! He was just going like that [makes a swaying motion with hands]. Never sunk a barge or nothing. Never sunk a barge. Man they was blowing them distress whistles on that pump boat and people were scattering! They had regular crews that went out on there to work on the locks. But by God he had sense enough to go around there. He seen what was happening and went down through them bear traps and went through them. Things like that you never hear, you know what I mean? And I'll tell you another thing, it ain't a nice thing."

Deck Work

"Well it's all dangerous." Nolan Connor said. "Wires could break and fly, ropes would break and fly while you were using them. OK, we used sisal [hemp] rope, which is very good rope. Then we switched to hemp and hemp rope was dangerous. You start bleeding it to go into a lock you know, the lockman comes down and gets you eye. It would grab a hold. But it was dangerous. You asked for dangerous. Down on the Ohio River at Gallipolis, it had a curve in it. The lockman would walk up with a hand line and a hook and drop it down to whoever was there. You put that eye of the line, 300 hundred

foot line, and you'd put it on his hook and he'd carry it down the lock wall. If it got out of control up in the wheelhouse they'd hollar at you, you didn't have no speakers, so you'd get that 300 hundred foot line from getting out of control. It took three men to carry that line out put that line on the head of the barges. If we weren't going through Gallipolis you didn't take it you just put on the deck.”

“I was always a little leery around them wires and chains breaking,” said Justin Wilson. “Like when you'd be going into a lock or you was steering hard and stuff. You'd have some captains whose mark was rough, steering you know. They'd throw the rudder hard down and that was a hell of a strain on a wire you know, they'd snap and bang and crack! Chains would fly half way across the river! Oh yeah, a lot of guys down through the years got hurt. Broken legs, different things. But you never heard nothing about it, you know. But that's what it was you know, when you hooked them chains and stuff up wire would come around and it'd have a deadhead in there and a ratchet. You'd do it on the other barge and bring it back. You had a pelican that you would put in that link. And you tightened that up and that's how you kept your barges tight up against one another so they could steer them see. And using a line too, that was bad because we'd get tangled up or anything, a lot of guys had their foots [sic] cut off and stuff.”

Scott Hurst talked about the dangers of “Jack Knifing”. “When you come out of the Mon River with six coal barges, they would be two wide and three long. Well for the Ohio River locks you had to change your tow around, you had to make them two long and three wide. Soon as you got below the McKees Rocks bridge, you did what they called a 'jack knife'. The boat would hold onto three barges, two and another alongside of him. And they would catch a line and swing them out and that's what they called a jack

knife. Well the stern deckhand, his job was to carry a line. He had to walk the gunwales of the barge. These were loaded barges too. One day the pilot got into a big hurry and he was moving too fast. I actually had to run to carry that line. The mate said, “Drop it! Drop it in the river to hell with him!” It was too dangerous, so I did; I dropped it into the river. It took him a while then to get everything back in shape because he didn’t have that line to swing over. If them barges were being jack knifed then you would be in between them when they came together! He was trying to do everything too fast. It was dangerous enough when you done it right!

Ice

When I asked Talbot Smith, “what was the worst part of working on the river, he said, “Well during a cold spell and the ice, has to be about the worst. I was telling you how people would fall in. You’d try to get them out, but sometimes you can’t.” Ice was major problem on the river for the steamboats. It glazed railings and decks, destroyed paddle wheels, and created ice dams on the locks (Figure 30).

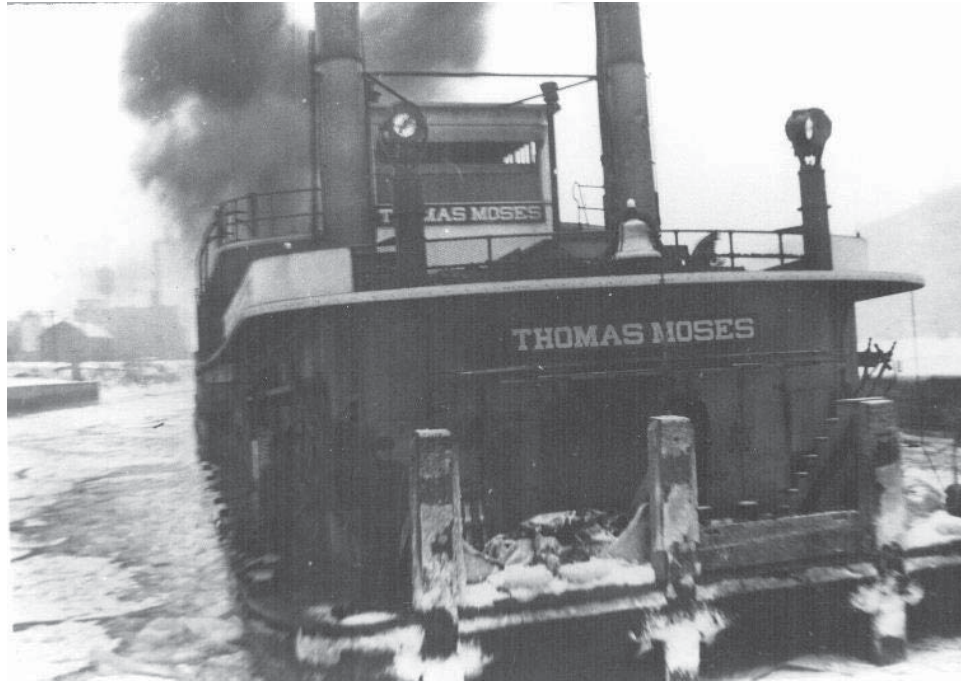


Figure 31. The *Thomas Moses*. Ice glazed Deck and Railings. Photo courtesy of California University of Pennsylvania.

Greg Hall said of the ice, “But the ice...sometimes the ice would build up over the dam. Sometimes we had to tie off and take what we called the “light boat” without the tow and go out and run along the top of the dam to break the ice up. I didn’t like that!” The “light boat” was a steamboat without its tows of barges. One mistake while removing the ice from the dam and the whole boat could go over.

On such account of a worker slipping on the icy deck was told by Justin Wilson. “...in case someone fell in the river and someone happened to be there by that bumper block...Say you was flopping a barge, you’re going to flop that barge back alongside the boat. Say somebody fell in the river; you grabbed that bumper block and put that bumper block down over the side. So when that barge come in, she could only come in so far and not crush the person. They used to carry them on all them boats. I had to use one time. I

never dreamed I ever would have to. A guy by the name of Old Folks fell in the ice, and by ice I mean the kind that would get up on the guards in the winter time, get pretty damn slick. He was going back to the engine room or to the deck room rather to get a line or something and his feet went out from under him! Well I happened to be standing there. Why I did it I'll never know, I guess because they told me that what it was and how to do it. And by God listen, that boat was coming in broadside it was going to go up against a loaded barge. He'd have been gone! I throwd that SB [son-of-a-bitch] down over that thing [hull] and the barge just bumped the block, that was it! The engineer was standing in the engine room door and reached right down and grabbed him. The boat wasn't under way or going fast or anything. It was just coming around, they was rounding to the boat. But they was getting loads and his feet just slipped and he went right into the river. I happened to be standing right there and grabbed that thing man, and threw it in there! I didn't even hold the painter [line] I just threw it. Cause it just bobbed. Man I don't know how many times he thanked me. Old Folks was his name."

"We were going in getting ready to leave and the boy was making a phone call." said Gregg Hall. "I was down in the engine room looking out of the door. He was waving at me, and instead of stepping onto the barges he stepped right off into the river, ploom! So I went out and grabbed him. I said, 'What the hell you doing?' He was embarrassed. It was ice cold, but we got him out of there. But that's what you can do if you're not watching! In them days barges were narrow, later on they got wider and safety first kept catching up and they got the radio, they got the radar."

Gregg Hall continued. "But during that ice, I remember, we were couldn't shove six on the account of the ice, then we couldn't shove four on account of the ice, then we

got down to two and we could go forward. In the meantime, that paddlewheel got broke up because it hit these big chunks of ice. So we had to get back in and get what they called a bucket plank, that's what's on a paddlewheel and rebuild the paddlewheel. But I remember at Mon City, I just stepped right off of the boat and onto the river, onto the ice and walked ashore and went up and got a newspaper and walked back and got on the boat.

Well the ice. The main thing was, the damage to the paddlewheel. As far as danger, personally I didn't see any, unless you fall on the ice. Now my job as a striker, we had steam because I had to make sure that the intake for the water to operate the pumps in the engine room to maintain the vacuum so forth. That was our main supply of water. Well the intake is outside, and it would get loaded up with ice and we had a big float I'd have to keep an eye on that. But then we had what they called a shoe valve, that was nothing but live steam, and I'd give it a shot of that and that blow that thing out. In the mean time I'd have to go up one deck in the after stern, we had two kort nozzles with steam and water mixed. I had to set them on the pitman arm, the journal and the wheel no melt the ice to keep it away from the paddlewheel from breaking up the paddle wheel. Understand?

I did that. Then in the lock, I'd go back and take an axe or a hammer and chop whatever was loose that I didn't get. That's about the only danger, personally was going out on what they call the Fan Tail."

Packing Dynamite

Packing dynamite was a term for impeding the operation of the safety expansion valve on the boilers to achieve pressure above the stated regulations. The Steamboat

Inspection Act of 1852 made it illegal to modify or prevent the operation of the safety valve by personnel on the boats. Justin Wilson explains, “That boat like the *Aliquippa* and them, they'd be coming up the Mississippi River or coming up the Ohio River, where she was real swift, they was trying to make time. Well, 260 pounds of steam wasn't doing it. That wheel just do all she could do. They'd take a grate bar, that's what you put in the furnace, and the pop off valve was up on top of the boilers, like if you got over 260 pounds of steam, and you wasn't using all that, it would blow off to the roof. Well they'd tie that thing down! They'd weight that thing down with that [grate bar] and the she wouldn't pop off. Well hell, they liable to have 300 to 350 pounds of steam on there! See they'd put a live steam line in there, into the engine room, back there. They run what they called a live steam line. If you had an old engineer that actually worked on them, they could explain it better than me.”

However, it was a common and dangerous practice during the 19th century when captains raced their boats for faster times and larger profits. The spirit of racing steamboats and the need for making faster times was still part of the steamboat culture of the early 20th century as well.

“Go, go, go! Exclaimed Justin Wilson. “They would even try to pass one another pool to pool and locks. They'd try to run...say you'd lock right behind a boat down there at Lock #3, like going up river. That guy behind you, if there wasn't anything behind you...soon as they got that boat, because there wasn't much of a lift there, you might only be up around Elrama, that guy is coming out of Lock #3. You had them port powered boats like them Carnegie boats, they was 15/30 and them Pittsburgh Coal boats were only 14/28. So we held more steam then them, we'd give them a chase but there used to be

some hot races on that river! You'd be tied up in the fog or something, and that fog would start clearing up, man you'd hear everything out there getting ready to go. The race was on then! Hell, you might have five, six, seven, boats in the pool then. Racing I mean. Racing to get to Lock #4.”

Modifying the safety release valve had dire consequences. Justin Wilson gave an unfortunate account of tragic end to the *William G. Clyde*:

“When they sold them two boats, they named the *A. O. Ackard* the *Homestead*. The *William G. Clyde* they called her the *James E. Lose*. But that *William G. Clyde* blew up. They was packing dynamite on her. Some of them engineers would do it, see. Unbeknown to the company. She blew up, she blew her boiler, two boilers forward coming up the Ohio River one time. They used to run her all the way to New Orleans, the *Ackard* and the *William G. Clyde*. They blew these boilers and killed the colored fireman, when they had colored firemen on there. Well I had a cousin named, W___ F___ he got a job down there at Marine Ways when they brought her in, when they towed her in. And they was shoveling the coal off the bunker so they could put her up on the Marine Ways. They’d shovel that coal off, you know, the weight. He found three fingers in that coal. That fireman was blown back into that coal pile, them fingers. He told us. I said, “What did you do B___?” He said, “Well we told the engineer right away and he said not to touch them.” They called up the hill there in Coal Valley, and they come down and put them fingers in alcohol. And took them up. That’s they found of that fireman. Probably was blown right out into the river.”

Greg Hall gave an explanation of the Coast Guard's role when dealing with the safety valves on the steamboats. “A safety valve, yes. You were allowed 240 pounds of

steam pressure. Some boats were less. But the Coast Guard inspectors set that steam pressure and they had a safety valve. You go over that, that safety valve releases and the excess steam goes to the atmosphere. But they set the safety valve. It was against the law to touch the safety valve. If we'd done anything to the safety valve that needed done, then we had to notify the Coast Guard and they had to come and check again and reset it to make sure, that was under the law. I know one time or safety valve was stuck and we had to shut it off to get the check valve loose. But then we had to report that to the Coast Guard. It was all strictly on the up and up."

The Bastard in the Pilothouse

The steamboat captain, was the quintessential gentleman sailor of the inland rivers. Often portrayed as well dressed, casual, and cool even in the face of danger, the captain of Mark Twain's time had long vanished by the 1930s. As related in Chapter Three, the captains of the Early and Middle eras of the steamboat were often treated as celebrities in their communities. They often owned the steamboat or a portion of the steamboat and invested in the companies that would later try to consolidate them, such as the Pittsburgh and Brownsville Packet Company. Some were integrated into their communities and some had influential positions within those towns.

The captain of the Late Era was different in some key aspects. He no longer owned the boat or a part of the boat he was commanding. He was an employee of a larger corporation that was owned by one of the steel mills such as US Steel or Crucible Steel who in turn, owned captive coal mines. The captain had to answer to a larger corporate entity than his peers of the 1800s. The captain during this time period could hire and fire

crew members but did not set their wage or working hours like those before him. A captain ordered supplies for the boat, carried out payroll, and kept the manifests. Before the unions came in after World War II, the captain had absolute authority on the boat. The captain of the 1930s, just like his earlier counterparts, came from either families who had ties to steamboat industry or worked their way up through the ranks. The one thing that most steamboat captains had in common was education or at least literacy.

Justin Wilson when asked if he ever wanted to be a captain of his own boat replied, “No, I never did. There was a lot of guys on the river that never did. Education is one thing. I never had no education. I only went through about fourth or fifth grade of school. And you had to do a lot of studying. I wasn’t much on book work. I knowed a lot of guys that couldn’t read or write that worked on the river... But see, they had to sit down and write everything down. If they could have taken an oral test, they could have had a license.”

Captains were notorious for their tempers and the ability to make working life on a boat hard for those under them. Nolan Connor remembered a captain nicknamed “Pee-wee”. “He was a good man on the bank but he was a bastard in the pilothouse. When he was a captain, see a captain of a steamboat was captain they told you when you went to the bathroom and if you took too long they came down to check on you. They were just mean is all. Now not all of them were that way but three quarter of them were. We came back off the tow soaked. 'I want my deck painted.,' said the captain. We're soaking wet we were out there for hours during that storm. 'I don't care I want that deck painted!' He had a kerosene lantern, two of them, brushes and paint for us to start painting. That's how dirty he was.”

“Oh Yeah, said Justin Wilson. “Like if a captain didn’t like you. He could make it hard on you. He could do things...Like you’d be out there and he’d tell you to go out there and it might be twenty below zero, wind blowing, and tell you, ‘them signal lights are out! Go out there and fix them signal lights!’ He could work on you. He’d do things to make you get angry and you’d say something to him and he’d fire you right there. And them old hard headed captains, and there was a lot of them.”

Talbot Smith “Most of them was good. There was a couple of them that we used to call them...[choose an expletive] well you know what they used to call them. Many old ones I worked with...you know were...you know what I mean. Well I’ll tell you what happened there. First job I got I told you I went out on the *B.F. Jones*. Vesta 4, they sent the boat up there. There was, you know, a mine there. When I walked on there, they had the steps like, you know [steep] and there was the wheelhouse there, it didn’t have no windows in it. No windows in the pilothouse. They had brush boards, they one here and one down like that [motions with hands]. So, this old captain says, ‘Who’s that blank blank! [expletives] hunky coming on here now.’”

Smith tried to recall his name. “Captain...I can’t think of his name, he was out of McKeesport. So you know what happened by the years end? We were on the *Vesta*, so I was pilot and we were going in there...every sixty days you had to clean the boilers out you know. So they had the crew do that, whenever they did that. Anyhow, sometimes it would take two days. So this morning I went there and there he [captain] is at the door...wait, I’m getting ahead of myself in this story. He said, ‘You stay and everyone can home tonight, everybody out.’ So, I came back there’s that door, he’s trying to get in his room, stateroom. He’s trying to get, trying to get in, and he can’t get in. And I said to

him, captain, you want me to help? He says, 'There's something wrong, something wrong with this lock, I can't get in.' He then says, 'Can you stand for more watches for me?' Yeah I can!, you know what I mean? He says, 'I can't see at night.' So, he says he wants to work. So to make a long story short, I made a trip up to the mines and then going back he was replaced. You know, he'd ring me up and down, get me out of bed. This guy says he's having a rough time. I go down and talk to the chief engineer, and he says, 'Hey, I can't work with him, a guy like that. And Talbot can't work like that, twenty-four hours a day. You're going to have to do something.' So that was the end of him."

Justin Wilson remembered the rules on a steamboat and how a captain could twist those rules in his favor. "Rules, oh yeah. You'd get fired, thrown off. But it went on. That's what I said about those captains. They thought...they'd fire you if they seen you talk somebody they thought was his girlfriend. You was gone. That was one big reason. A nice looking guy get on the boat or something, they'd [captains] be jealous. See you talking to her or too much. You're gone."

Scott Hurst recalled when the men of Crucible Steel signed a petition not to work on Christmas. "You know the *Snyder*, the crew on there... Back in them days, you weren't...there was a rumor going around that they were going to work Christmas Day. The whole crew signed a petition that they were going to refuse to work. They paid the whole crew off. Crucible did. And it was just a rumor, they didn't have to work Christmas after all, they weren't even asked to. But because they signed that petition... Hey it was rough working on the boats in them days. My father-in-law was a pilot. Back in them days, you didn't get a day off. If you wanted off to get married or something, you had to get somebody to work in your place. Cause if the boat was down in the lock, and

the captain's nephew was wanting a job he just paid somebody off. You know. It was rough in them days."

Captains had to deal with shore bosses and superintendents who represented the various companies who dispatched the boats to the mines or mills. Shore bosses and "supers" were often captains who had advanced through the company and were promoted to desk jobs. The relationship between the captain and the "office" could at times be strained as a battle of wills often could take place. The captains and their cavalier attitudes and the shore bosses who were sometimes regarded as company sell outs often boiled over.

One such exchange was told by Scott Hurst. "One time the derrick boat operators...we'd go down and pump an Ohio River lock out. We'd get flooded out for weeks at a time. One time we went down there and worked a weekend and got flooded out. So they changed everybody's shift and made them take two days off during the week. Well three of the derrick boat operators finally got enough of that. They went down to the office to see the head hog and complain. Well, M___ H___ the head hog came down out of the office with G___ W___ the superintendent who was a son-of-a-bitch too. H___ started to tell him about waiting too long and he shouldn't have done that. W___ just pulled up and said, 'Hey, Hey! If you're not satisfied with my work, I'll just quit!' H___ listened to him carry on for a bit and said, 'G___, you do that, you quit. And we'll miss you. We'll miss you for about two hours before I can get L___ M___ down here to take your place. Then we won't miss you any longer!' [laughter] That's the way they run her in them days! "

Alcohol

There were rules in place on the steamboats that prohibited the consumption of alcohol by the crews. In a dangerous work environment, impaired judgment could cost a deckhand his life or put an entire boat in jeopardy. When a captain received the orders for the boat from the office, those orders were expressly hidden from the crew including their destination. Captains would often tie their boats up at places along the river with high banks so that crew members were unable to leave or sneak off the boat. When asked if there were rules to drinking, Talbot Smith replied, “Oh yeah, we weren’t allowed. Sometimes you’d find a captain though...”

Justin Wilson described “going up the hill for a captain.”, “But see most of the time they wanted you to, like in high water, if you was on watch you wasn’t supposed to go in case something happened to the boat. You was responsible. So if you was off watch, you know like say you got off at six o’clock in the evening, well you could go up the hill and stay until...you was due on watch, you had to be back by then. Like I said, Pittsburgh Coal was more lenient that way than US Steel or J&L. US Steel was the worst. I knowed guys that never left the boat. When they worked ten and five, they never went up the hill. I mean, I knowed them personally myself. ‘Oh hell, that captain would fire me as soon as I got off [the boat]!’ he said, ‘they won’t let us go up the hill.’ But like I said, you just have to be with the right crew, the right captain.”

Justin Wilson described the fine line that workers walked when it came to alcohol use on the steamboats. “Well, like on steamboats it was a bit different. US Steel and J&L was very, very strict. But Pittsburgh Coal was more...I don’t know. The people who went from the boats into the office like J___ H___, he went in the office after B___ E___.

Now he was a drinker himself, you understand? And he understood a little nip in the cold weather, different things like that as long as you didn't abuse it, get drunk on the boat or anything. In fact, he even brought us booze in cold weather. But that's the way it was, if you took care of things. They had certain captains who were pretty strict, but if they knowed you wasn't abusing it and getting drunk and maybe get hurt, they'd let you get by with it. But every once in a while they'd clamp down on you. Like me see, we always liked to had a good time and we'd drank beer and everything. As soon as that boat hit the shore we was up over that hill and if we saw a neon light we was gone! But see you had to have the right captain on the boat in order to do that. You had a guy who was practically like you was. In other words we wasn't drunks but we liked our beer and have a good time. “

“Brownsville was a deckhand's run,” said Greg Hall. “We'd go to the captain, 'We're going to the phone!' They knew they made a beer run. [laughter] The captain didn't mind, but they had to go down and get the beer while we were locking.”

“So anyhow, we leave Pittsburgh, said Talbot Smith. “My wife gave me ten dollars, that's how bad we had it, it was bad. We had two little kids you know? So we're down around Memphis, somewhere down around there. A guy says, “Hey there is this wine store. Let's all put in fifty cents.” Back in them days, everyday...we had a boat, a motor boat. He would go ahead and call the office and let the office know where we was at, you know. And so one of us got to go with the mate and drive in there [motor boat]. The guy says, 'I know where there is a liquor store at down here.' So they bought the cheapest wine that there was [laughter]. Four quarts of it! It was so cheap there was dust on the bottles! So we're on one of them big boats...A DPC boat... See them four girls

extra pilot, it was really plush, you know what I mean. Anyhow, he gets the wine. We want to get the tow then get that wine drunk tonight. I swore too because I put my fifty cents in or a dollar too! So I go to bed and in the morning, I went to bed about six o'clock about ten o'clock in the morning this deckhand comes running in. 'Hey Talbot, hey Talbot', he says. 'Guess what we're going to leave...' At the time we were running pipeline. 'I'm going to put it into that pipe, in the barge with the pipe.' The captain can't see it. He says, 'Guess what?' I said, What? He says, 'They're going to drop that barge off down there!' I says, What barge? 'The barge where the wine is at!' [laughter] He says, 'I can't go out there and get it, the old man would pay me off!' There went our wine! I'll never forget that. This one guy, J___ R___. He was another pilot. He was a big guy you know. He cried, 'There goes my wine! There goes my money!' [laughter]"

Captains on the steamboats were often known for their drinking ability. They often used the deckhands to make liquor runs in the various towns. Crewmen would use the towboat's yawl to make the runs, or get off at the numerous locks on the river. Justin Wilson work for a few of them.

"If you were on a boat like you say, I knowed the ones like B___ P___, J___ H___ he was a great whiskey drinker, Hook Smith from down there at Dravosburg, he'd drink a barrel of it! I was just lucky enough to be working with those guys! And they could trust you because they knew you wasn't going to squeal on nobody. They took you into their confidence."

Justin recalled a story. "But hell, I've had captains come to me and say, 'You guys going up the hill? Bring me back...' this or that. Bring me back a paper, you know, you did favors for one another. He;d just say "watch your step". I've taken a barge load of

cigarettes back. Newspapers and stuff you know. I was going to tell you a story. Down at Lock #3, I must have been when the Korean War started because the Second World War was the same way when I was a kid and working on the river, before I went into the service and stuff. They put guards on the locks. Well, then they took the guards off and these here certain lock tenders, they wore a gun. They strapped a gun on. OK, so if you're coming up the railroad or something trying to get to Lock #3 like you're going to catch a boat or something, they'd stop you. And they asked you, "Where are you going? What boat you on?" If they didn't know you. But if they'd see me coming, they knowed I was coming for a boat. But what I was getting at was, this guy...I didn't know he was carrying a gun. I didn't know at the time. That's when they first started. Well, I was on a boat with old B___ P___, he was captain. He put me off in the yawl up at Mon City, and I got a taxis cab from Mon City down to Elizabeth and I went to the state store. I got about four-fifths of whiskey and a bunch of beer and I was headed up that railroad track to meet him. She was the next boat coming down. I got ahead of her in that taxis cab, see. While they was coming down the river, that taxis took me down Elizabeth, and I got my stuff and I let that cab go. I walked up the tracks see. Well here this guy, he has this gun on him and I didn't know it. I come up there and come by this building. There are a set of steps going down to the lock wall. Well he hears me coming down them steps, and he's standing behind that wall where that walkway is coming down. When I got down right at the bottom, he stuck that gun right [makes motion at chest level] and screams, 'Halt!' When he did, I just throwd my hands up! There went all that whiskey, beer, all them bottles! Crash! Then he said to me, 'All hell kid, I didn't mean to do that!' I said, A bad time to tell me now! Here comes the boat into the lock and here is old B___ P___

wanting a drink! Old Red Nosed B____, he looks out and throws the headlight right over on that pile of glass. He said, 'Hey Cajun, come over here and get this money. I'll back and put a yawl in for you down there.' I had to go all the way down Lock #3 back down to the state store again and get all that stuff and run down by the hotel down at the wharf, he put the yawl in! He wanted his booze!"

Talbot Smith found himself in a dangerous situation at the helm. "I go, the Emery Lock [Davis Island] that was a screw boat. So we got around Fayette City, a guy by the name of J____ R____ he lived there, had a couple kids there. He says, "How about me getting off and getting some beer?" He said this to the captain, and we all put in a dollar or two and he went and got beer you know. So we're going up toward Brownsville. A guy says, "I want to go to the liquor store, give me another dollar." So everybody put in another dollar, you know. So that night we went up to Shannopin. So we picked a tow up. We were coming down and changing watches. So I go down there and it was, oh, about 5:30. And the boat's coming toward the lock. Come in there, and every time I'd turn around a guy would bring up a glass of wine. I wasn't a wine drinker. Boy I'll tell you I was really under the weather, so I blew the whistle for the lock. The lock answered me and the mate and deckhands are out there. And I couldn't even see the lock! How the hell am I going to get this thing in the lock? [laughter] So anyhow, I kept backing around, backing around and you know, Lock 6 kept blowing the whistle for me. So around ten minutes to six, the Captain is still not up there. All the other crews have changed, ten after six and still no captain. Finally the mate went out there and said, 'Hey, I'm going back where it's warm now. You going to get this thing through the lock?' He hollered back, you know. 'I'm going back, I'm not staying out in this cold you know.' It was cold.

So, I said, Welp, here we go! So I made it down in there, and I made it good. The captain came up there, and he says, 'Boy let me tell you there are two things if you ever want to be a captain. Two things you have to remember. You don't drink and you don't fool with a woman on the boat.' He says, 'Not the way you're going, you're not going to make it. [to become captain]' That was the first and last time I had a drink on the boat."

Drinking on duty was not limited to the men on board a boat. Sofia Kowalski remembered a cook on one of her boats. "I know this one cook, she used to bring a bottle, Coke-A-Cola, but she had whiskey in it! But I never told on her, I let her drink. I never drank. Then we had another girl, she'd bring on vodka, a great big bottle. Her grandfather was the captain. She was a boozier, an alcoholic. I never ratted on her, no. I let her drink. Yeah! D___ W___. She was from Versailles [Pa]. But I don't think he knew it."

When a steamboat returned to the landing to unload the crew and pick up fresh rivermen, some of the workers would head to the nearest bar. "Hell we'd get together down there in West Elizabeth where that landing was there was a bar there," said Justin Wilson. "It's been there forever, he had a nice bartender there. Them guys, you'd be down there like... See when they had all them boats, M___, two boats change on and off on a Monday, two on a Tuesday, one maybe on a Wednesday, two on a Thursday, you'd have different days. Well them guys would be coming and going. Guys going to the boat, guys getting off the boat. Well we knowed that...we had a couple good buddies who'd say, 'Well hell they're going to get off today we can go down there!' We'd be in there all day together!"

Talbot Smith recalled when they went off duty after a trip. "Where the boats sat, that's where they changed crews. Usually the captain would stop at a bar and he'd buy

the first drink. Then some of them would stay there towards night, the deckhands anyhow. We'd be drunk for sure.

Family

The steamboat as a family, separate from the one who lived with off the boat, was a recurring theme that the interviewees returned to. "That towboat crew was like a family," said Scott Hurst. "Like I said, we got on the boat on Monday and you was there until Friday if you didn't work the weekend. So it was like a family. Nobody on the towboat owned an automobile. No use having one, the captain wouldn't let you off to drive it when they moved the fleet."

"Oh yeah," said Talbot Smith when asked if he would work on the river again. "I'd do it tomorrow. I should have stayed, they wanted me to stay. I should have stayed, but my wife died, and I wanted to get out and see other places and things. The biggest thing is, you always had three squares a day and you always had a clean place to sleep. And if you had a good crew, you had a good crew. One of us would always try to out lie the others."

"I think the best thing that I remember are the people I worked with and it depended on who you got with." Justin Wilson continued, "If you got with a good crew, time just flew. It was time to get off before you knew it. We stuck together. And I was very, very fortunate because I was very well liked, and everybody you know. Hell, I have guys that used to fight try to get on my watch. The captain would say, "My God I can't put everybody on one watch!" Cause they knowed I got along with them. As long as we

all worked together and got it done as quick as you could, it was just loafing then. After the tow was picked up, you was done. Until you got to a lock or something.”

When asked if the steamboat was like a home to him, Justin Wilson replied, “My grandson is in the Navy. He knowed I never fibbed about anything, if I told him anything I want it to be the truth. I was telling him about the camaraderie on the river, and how you’re together so long, you work so long, eat together, sleep together, talk about your troubles together, and then when you get off the boat you’re together. Well he found that out in the Navy, and he told me. “Grandpa, I found out everything you told me was the truth. That’s why I enjoy being in the Navy as much as I do.” It’s the people around him that he’s living with. It’s the truth. You work in a mill and you leave the mill you don’t see nobody. Everybody goes this way and that way but always someplace else.”

Greg Hall put the steamboat as family in more personal terms. “But anyway, it is one of the things that...you had some good jobs, some dirty jobs, you had some jobs you had to do. It goes right back to the family. Steamboats as a whole became like a family. We always had a lot of fun a lot of practical jokes, everybody had a good time. And everybody had their place at the dinner table, the captain, the chief engineer, pilot, mate, and so forth. Working on the river it was a lot of disappointments also. Ok. I’d call up home. Well S___’s [daughter] grade is graduating tomorrow night. I can’t be there, I’m on the boat. And when E___ was born, I knew my wife was pregnant, I got a call at Lock #5 “Your wife had a baby boy and they are all fine.” I said, “You think you can get me relief?” “Yeah, we’ll see if we can get somebody on the way back.” So they got someone while she was in the hospital. But things like that, you miss out on birthdays. They try to get you home on Christmas and New Years for holiday. ‘Somebody’s having a big party,

a big hullabaloo. You going to be off that day?' Nah, I don't get off until the day after. Or some days I'm supposed to get off and be happy with it, and the guy that relieves me didn't show up. So I had to stay on there. In fact, I was talking to my dad one day, I was supposed to get off. I remember on the phone, 'I thought you was coming home today?' I was pap but they guy didn't show. I'll see you when I get home. 'Well I miss you and I've been waiting on you.' Ok, I'll see you tomorrow. That night around twelve o'clock I was on watch at Lock #6 Rices Landing, I got a phone call. 'Your dad passed away.' Oh gee. So the chief engineer came down. He said, 'Have somebody come up to Rices Landing while we go up to so and so to get a tow. They can be up here when we get back down and you can go home. I'll stand you watch until they get somebody.' I was on a boat when he died. But that's what I say, steamboaters is a family all of its own."

Talbot Smith recalled the toughest part of his job working on the river, "That was the toughest! That was the biggest thing. Especially when my daughter was born and was in the crib, my wife had to take care of her all the time. She ended up being a nurse for twenty-two years before she died. Just like I told my wife, my wife was bed fast for eight and a half years. We always had to have a woman stay here and I'd say, "When I leave the kitchen door, I had to leave my troubles. I had work with captains. So everything worked out OK."

The personal ties that the crew developed while working on the steamboats through shared adversity, teamwork, and labor shaped their identities on the boats. The cohesion of recognizing your fellow workers as a "family" unit apart from their land based families separated the steamboat workers from the coal miners or steel mill workers who returned home after a day's work. The isolation of working on the river as

told by these accounts, made the workers dependent on one another. The boat was a community that provided shelter, meals, rest, and labor that operated on a twenty-four hour work schedule.

This section of the oral histories presented evidence of the link between the earlier steamboat eras and the continuing evolution of worker identity on the boats. Many of the workers interviewed had a long tradition of family ties to work on the river, and many had family members who worked on the steamboats. This heredity nature of steamboat work and life replicated and reinforced the values of working class identity in the homes of the families of the workers. Many positions on the steamboat were learned through a long line of oral traditions and apprenticeships on technology and methods that changed little from the 19th century.

Chapter 5 Unionization and the Diesel Revolution

In the last chapter, the steamboat crews, who told of their experiences of working on the river, provided a window into their personal lives while they lived and worked on the boats. They detailed their relationship with each other, with the boat as a community or home, and their relationships with the hierarchy of command. By exploring the nature of their work with its dangers, rigid work schedule, and sometimes drunken release, a vivid picture of the steamboat worker's identity formation comes into view.

This second half of the oral histories details how the workers fought back against the very things that help create their identity. They pushed back against the work schedule, they fought the authority of the captains, and they demanded to be recognized as laboring class. Some of these battles took place before World War II, but many were spurred on by the uneasiness of the after war years as new technology and a transition between fuels pressured the workers to organize. With their organization, they hoped to remain viewed as essential, skilled, and reap the benefits a union provided.

Strikes and Unionization

Labor strikes on the river were common during the early 20th century when captive coal mines stopped production and the workers walked out. The crews on the steamboats were laid up while the miners were on strike and returned to work when they did. It was rare for the towboat crews to strike partially due to the nature of the work and their isolation from other boats, and partially due to the relationship the workers had with their job site. The boat was not only a place of work, but it was also a home. A cabin

became residence in a larger community of the boat itself with only walls separating the workers from jobs and a hallway to separate the men from their bosses.

Unionization on the steamboats was born out of the 1915 Seaman's Act which limited working hours on a vessel to fifty-six per week, divided the work day into at least two watches, provided minimum berthing size, provided new guidelines on safety, allowed the seamen to sue for damages negligent boat owners, and most importantly, recognized the right of the seamen to organize (Kennedy 1916). The longshoreman strike of 1934 provided the basis for the subsequent 1936 strike of seamen on the Pacific Coast (Taft 1939). The seamen were bolstered by gains made by the longshoreman and followed their approach of militant syndicalism. This strike was supported by the Maritime Federation of the Pacific and its partners, the International Organization of the Masters, Mates, and Pilots which was formed in 1887, and the Marine Engineer's Beneficial Association which was established in 1875. The New Deal policies instituted in 1935 along with the Wagner Act, legalized the ability of labor to organize into trade unions. In 1938, the partnerships with the MFP failed. After failures of the MFP, the National Maritime Union associated with the CIO and the Seafarers International Union (SIU) associated with the AFL competed for contracts and members (Taft 1939).

Many of the people I interviewed did not want to talk about the strikes or unionization. When asked if the boats ever went on strike, some were hesitant to reply. Their loyalty was with their crew members and with the company who for the most part, they credited with providing them with a job, meals, and shelter during the Great Depression. Many acknowledged that the work was tough and captains could be mean, but almost anyone said they would return to work on the steamboats if they could.

Twila Kelly talked about her first-hand experience with a strike on the river during her time on a diesel boat. “Pretty soon he comes back and says orders have been changed. “We’re on strike!” So the four women we went to town and spent a couple hours. Then we came home. We had to take a ferry over to a place they called Algiers because our boat was parked over there, it’s the levee. We we’re laid up for two days. No air conditioning, it was miserable. We had fans, but we had to get them that ran on direct current. They made their own electric from the engines. Did that bird get dirty, both inside and out! I’m on strike, I’m not going to do nothing! So momma said, “You know when we go to leave here, we’re going to have to clean this boat. If we go into Pittsburgh with our boat looking like this, they are going to fire us all!” So the minute we got word the strike was over, I said, “Ok captain, get out in the road.” We scrubbed every room on that boat, inside and the deckhands between making up tows and things, was scrubbing the outside down. When we got into Pittsburgh, we looked like a brand new penny!”

The process of unionization was at times violent as Justin Wilson described. “That was in 19...I think it was that big strike in '47 or '48 either one. I just can't remember which one it was,” said Justin Wilson. “Yeah, they had to strike...or US Steel or Pittsburgh Steel. See was all used to try to ah, get the companies to try to go out together. We had a hard time doing that. One company would have a contract come out maybe six or seven months from your contract. Well, they didn't want to break the contract. That's why they did that, these companies. I think there was only about one time that I can remember that we had maybe three of them together. Now, I was going to tell you about Hillman. See Hillman was the last company to join a union. Them Hillman boats like, when they used to have the old *J.H. Hillman* running, the *A. B. Sheets*, *John L.*

Howder, and them. When I was on them, them stern-wheelers, them steamboats. They wouldn't even pull up alongside you, like in high water, they'd tie across the river. They didn't want the union people talking with the non-union people. Talking to them guys, you understand what I'm saying. For years and years. They wouldn't tie up alongside you or nothing! Well anyhow, we was laying at Brownsville. And the *Helen Z.* was towing coal for Hillman. And we was trying to get Hillman in the union. And we had negotiations going on and everything. So, the *Helen Z.* wasn't supposed to be bringing any barges down; they agreed not to tow no coal for Hillman because see they was trying to boycott Hillman to try to force them into the union. Well here comes the *Helen Z.* up out of Lock #5 with four barges. Well, we should have never did it, and we could have got into a hell of a lot of trouble but we boarded the *Helen Z.* we knocked the hell out of everybody!"



Figure 32. The *Helen Z.* Photo courtesy of Pittsburgh City Photographer Collection.

Unionization was a one boat at a time process that was slow and sometimes arduous. Talbot Smith recalled how a young woman coerced her fellow crew members into going union. "Let me tell you how that went. *Warren Elsey* was the boat, the cook there she was, oh, she was...from Monessen a strong girl. She was like a strong girl, she could do the work of any man, you know. They come around the boat for the union. And she says everybody vote for it. Which is the whole boat. The ones that didn't want to vote, you got them drunk and then they'd vote. They had all of these elections. So we're going down the river and she had a big sheet, like a bed sheet. She tied it on the rails that said, "We are 100% Union". On the offices, you could see them from the river, the main office of J&L. She tied that on the side, and the captain didn't know she had tied it! [laughter] They got down to the Emsworth Locks and captain got a telephone call. He went to the telephone, and one of the [bosses] asked him what that was on his boat. He said, 'What do you mean on my boat?' The guy said, 'It says you're 100% union!' The captain said, 'We're going to go 100% so we're not going to take it down!' The big wigs and vice president, they all saw it. I will never forget that."

Greg Hall remembers the days before the union. "Yeah, but it wasn't union before I started. I guess of course agents out of New York, kept wanting to know if the fellas wanted to unionize. Most of them voted for the union, then they dealt with a company and that's the first step. Instead of working for twelve hours a day, you only got twelve sometimes a week, you'd have two weeks. Sometimes you'd come in at ten o'clock at night and you'd go out midnight the next night! A young kid, you got off you made hay and you'd come back to work at ten o'clock at night boy you were bumping into things

because you made most of the time off. Finally the union got in, and finally we worked ten days on and off four.”

In November of 1941 it was the steamboatmen’s turn. Fifty-two riverboat operators of the Carnegie-Illinois asked that the A.F. of L. Masters, Mates, and Pilots Association to be their designated bargaining agent with the US Steel. Twelve boatmen tied their towboats up at night and walked off costing US Steel 50,000 tons of coal a day that they remained at dock. The workers requested changes in working hours and a ten percent pay increase (1941). The strike ended in four days when the National Labor Relations Board agreed to conduct a hearing on the union’s petition for the right to be recognized as a bargaining agency (1941).

Strikes continued throughout the 1940s as steamboat workers pushed to be a recognized labor force. Boats with white banners proclaiming they were union boats plied the Monongahela River as an example to non-union companies. Violence broke out between non-union and union boats, with one account of a boat being boarded by union deckhands and fist fighting the non-union crew of another boat. Worker tied up boats and walked off their jobs in order to get the attention of their company’s bosses.

By the end of the 1940s unionization on the river had taken hold in a unique way aboard the steamboats. The Masters, Mates, and Pilots Association (MMPA) represented the licensed crew from the captain to the mate. The Marine Engineers Beneficial Association (MEBA) represented the engineers on the boat. The National Maritime Union (NMU) represented the deck crew, the deckhands, firemen, chambermaids, and cooks. Once a crew member became licensed, they had to leave the NMU and join either MMPA or MEBA depending on their skill set. Nolan Connor remembered when the

unions came in, "National Maritime. They came after all of the John L. Lewis' coal mines got their contracts."

Justin Wilson described some of the tensions the union brought to the boats. In the case of the mates out ranking the pilots. "See the mates was called, the Masters, Mates, and Pilots. That's what they was called. See by rights, the Mate was the second in command. You read that see, and there used to be a lot of arguments about that. Some of those old hard headed pilots, the mates see, you look on the license and even on the boat and they're [mates are] higher up. But see, like the National Maritime Union, you take on like a steamboat, there was captain, pilot, mate, and two engineers, there was only five people on a boat that belong to a different union. The rest of us, all the deckhands, firemen, chambermaids, and cooks was all National Maritime Union, you had a lot of personnel. On each boat, you know what I mean. Then on the ocean, same thing, a lot more NMU people than there is licensed people. It's a big outfit. Yep."

According to Justin Wilson, the union attempted to place river labor onto a mill work schedule. "Yeah, may as well say it's the same for a two-week pay period. You worked 4 more hours that a mill person did in a two-week period. The wages were comparable, you know what I mean? I know when I worked a mill man might make a little bit more than you but very seldom. Those wages were almost...the coal mines, the mills [were about the same]. Of course now I don't know how they get away, you know what I mean. But that's why they started working seven and seven. That's why the union did that because in seven days you work eighty-four hours in a pay period. Whereas the mill works eighty. See, they work five days on two days off in the mill. But when you work seven days, twelve hour days, that's eighty-four hours. That's how they figured that

out.”

When asked about how many people wanted the unions to come in, Talbot Smith replied, “Oh yeah, yeah. A hundred percent.” However, when asked if the captains wanted the union, his opinion changed. “No. We... well all the deckhands did all the work. The deckhands were the ones to go on strike in 50’s. So we just followed through. We asked the company for what we wanted, that’s why there was so much difference in the pays toward the end. We all stuck together. They tied the boats up at different places there. Then that was the end of the ball game you know.”

Representatives were called to New York for a union rally. Greg Hall was one of those sent. “Twenty-five days we spent in New York on account of the union. One guy was a Russian, what did they call them back in them days? But anyhow. And the president said get everyone there from Pittsburgh. He says we have to meet because that’s when everything was directed toward Russia. You know, Russia is supposed to take over everything. So we did we went down there and I’ll tell you, it was rough leaving a woman with [motions with hands] good sized boy. Yeah he said if he didn’t become president. At that time there was always something going on, back in them days. And every union was arguing trying to get into it. So anyway we went union ten and five then we had to go on strike in ’59 I think it was then it was day for day.”

Nolan Connor worked on the boats before the union came in. “When I started they wouldn’t let you go home no days or no nothing. Then the union got started. OK we started working ten days on and five days off. We called it ten and five. OK, the union came in, I can’t tell you what year. Anyhow before the captain could come down stairs and see me sitting on a bench you know, and say, ‘You’re not busy. You go get a paint

brush and paint this' or 'you go get a brush and brush sweep this.' Because I wasn't busy. After the union came in there was no scrubbing or painting from oh, I forget the name of the lock on the Ohio River, to the Hildebrand Lock in Fairmont. So we'd get the newspaper or book and cross our legs and the captain would see us and come down the stairs and see us doing nothing. He couldn't say anything to us!" Anne Novak recalled how tough it was before the boats were unionized. "Pretty much years ago you worked thirty days at a time. You were gone for thirty days and never saw you know. Unless the boat was in an area you could get off for a little while and get back on."

Justin Wilson was a union delegate on the boats. "Whatever barges was left at the coal mine, if they went on strike at midnight, if there was six barges left there, you could take them out of there. You know, like a lot of times you'd be going up river with empties. They'd let you put the empties in and take them six, but that was it. They was loaded up already, yup. They'd let you take them out of there, yeah. But the next boat coming up, wasn't going to take nothing. I brought the *Mongah* all the way from Arkwright Mine, that's up by Morgantown [WV], with one barge on a strike. We had a strike on the river. And that captain on there named C___ J___, he was going to fire me. I said, well, that's up to you. I was a Boat Delegate. I said, if you want to go out of here, you're going to go out with one barge. That's all we're going to take. Cause you had the back of the union see. And that's what they told me to do. Like if anything happened on the boat, like if a captain wanted to fire you for no reason at all. They wanted to fire a cook, they wanted to fire her. Anybody brought into the MMU, every boat had what was called a "delegate". He was like a trouble-shooter. You had to go to the captain and try to get things straightened out. And if you didn't straighten them out, you called your union

hall and they sent a union representative out. You might tie that boat up right there! Said, you ain't going!'

Wilson continued describing his role as a boat delegate and some of the arbitrations he had been a part of. "Well like I said, the captain trying to work a guy off a boat. Same thing with a woman. If he didn't like a chambermaid or he didn't like a certain cook. He'd say they did this, or this wasn't right. Just different things every day. She didn't order the right stuff or she ordered too much stuff. Just little bickering and things like that, you know. And then we had, like you would have in a contract it would say you had three lengths ahead of you there. You're going down the river and you're going to tie these barges up. Now three lengths is a long way to carry stuff. Like head-end rigging and a big heavy lock line and a big light. Some of these captains didn't want live up cause it said, that you would go to each coupling. Says in the contract. Go to each coupling and pick up rigging. Rigging was ratchets, chains, your lines you work with, your signal lights. Some of them captain would make you carry everything. They'd just sit up there and read a book or something and tie the boat up right there, tie the barges up, and you'd take everything off and carry them big heavy lights, stands that was on loads, all your rigging and everything back to the boat. Well that wasn't allowed. The union got us in there that you had to go out with the boat and pick this stuff up. Well, that would be a grievance. The captain, if he didn't want to do that, I'd say, well we're going to call the union office. Well then the company, like that J___ H___, he'd have to come over there, a union man would be there, and we'd be on the boat and he'd have to get after the captain. The company would stick up, they'd say this is what's in this contract, it says you have to stop at every coupling, put rigging off, and pick rigging up. Now that's what

we want you to do. Well see them captains would fight that. After that was over, they'd go for maybe about a month or so, and go back to the same old routine again. You had to keep after them. Different things like that. Or like a captain might say, we don't want you up in the cookhouse more than one time a night. Some of them dirty guys you know. Like you go out there and make a lock and it'd be cold or something. Well as soon as you went back, you'd take your clothes off and go up the cookhouse and get a cup of coffee or sandwich or something. Well, he'd have a sign up there, "No loitering in the cookhouse! One cookhouse to a watch." You know what I mean, one stop at a cookhouse in a six hour period. Anything to try and make it hard. And then you had other guys like Z____ H____ and them and that bunch, one of the nicest guys you'd ever want to meet on a boat. Everybody got along. But they had some hard heads on there, I'll tell you. I was fortunate, I got in with those old rough and rowdy guys from way back, they didn't care about nothing. They'd be three sheets in the wind all day. They did their best work when they was three sheets in the wind. Yep. But see, them US Steel boats, none of them man. They was never allowed off that boat. In seven days, like if you tied up, they wasn't allowed up the hill or nothing. But some captains would just let them. Like if you tied up at Brownsville, you know that hotel right there at the end of the bridge. A lot of times you'd tie up at Lock #5 because that was the first lock you'd go out. You might have four or five boats ahead of you there, wait two or three days as the water got down. See all them Pittsburgh Coal boat guys would be up the hill. Them US Steel men, no way. Just depends on what boat was there. Now the captain on the *Homes* said, get on. If you see the *Duquesne* there well you knowed a couple of those guy would be coming up the hill, you could talk to them."

I asked Justin if the real resentment for the union was about the captains giving up control. He replied, "That's what it was, yeah. That's what the union, see and them old hard heads like I said, it was there and just ready to go out when I came in there. They was so bitter about the union, they used to try and make it as hard as they could for guys. And that sort of worked out. Yeah, most of the licensed personnel were against the union. See another thing, you take companies like Pittsburgh Coal, Carnegie wasn't that way cause that was a big coal company, I mean a big steel company. Now Hillman and Pittsburgh Coal, they was brokers. In other words they towed coal to power plants, steam coal down in Pittsburgh were them big buildings were heated with steam, where US Steel they owned their own mines, their own boats, and they towed right to their mill. I know it was a tough thing there at first about the union, there was a lot of fights and bitter hard feelings, you know, between different people. Cause the engineers wasn't in a union at that time, the pilots the captains wasn't in a union. And they hated the deckhands because they was in the union and they couldn't control you like they did before."

Wilson talked about being in arbitration as a union delegate. "I'd take it to the captain first. Whatever the grievance was, you had to go to the captain and see what he said. And if he didn't want to listen to you or anything else, then you just had to call the union hall and they'd send a union man out. I went to every contract we had for I don't know how many years, I had to go. I even went to the big delegation in New York. They used to have a convention out there every so many years. I went to two or three of them. The union paid for all of that. All that was, you went in there with the lakes, deep sea, and everything. I was with old J___ K___ was a big shot in the union. Hell, I've seen him, met him, many a times."

The union took away the power of the captains and replaced it with a more regulated system on the boats. Sometimes workers abused the new contract system of rules and regulations that were in place to protect them and instead chose to use them to avoid work. Scott Hurst told of some of the abuses he witnessed. "It got bad. Like I say, when I worked on the *Snyder*, somebody who worked for that company he had to recommend you, or they wouldn't hire you. OK, after the war, it go so that they would hire anybody cause nobody wanted to work on the river. And it went downhill fast. The deckhands got so lazy. When I was on the *Snyder*, we came up through Braddock one day and it was crew change day where we were going to change crews at Crucible at the mine. Well the old boiler deckman, the boiler deckman on the steamboat was the fellow who was an old deckhand or fireman that got so he couldn't do it anymore. So he became a boiler deckman. He worked twelve hours straight from six in the morning until six in the evening. He kept the cook's stoves fired up. They were all coal fired in those days. And there were coal fired heaters in the pilothouse and all around the boat, he kept them fired up. He kept the decks swept because you got a lot of dirt from the smoke in those days. He got the coffee ready before breakfast before he called the cooks, you know. He was just a handy man on the boat. Well anyway, it was his duty...at the front of the smoke stacks; there were two big cylinders, called coal bins. Ok. They filled them up with a clamshell bucket at the steel mill and at the coal mine. And you had just enough to do you. When they filled them up they piled coal on the deck up around them two cylinders, as much coal as they could pile on the deck. When it got low, the bin would be empty, and somebody had to shovel the coal was piled onto the deck into the bin. From six in the morning to six in the evening that was the boiler deckman's job. From six in the

evening unit six in the morning the deckhands had to do it, that was in the contract. We come through Braddock and the captain let the boiler deckman get off there instead of riding the boat to Crucible. Cause he lived there at Braddock. Well, the boiler deckman, everybody forgot about that coal that had to be shoveled. So come time to do it, I just went and got a shovel. I didn't know any better, I was just a new deckhand. And I started shoveling the coal, the other deckhands stopped me. 'No, that's not our job,' they said. You know, the captain had to come out and shovel all that coal. Now that's how bad it got on those boats! Everything had to be in the contract. It got really bad. How many times you had to wash the pilot house windows was right in the contract. Yeah, they really got lazy. I remember one time, we had twin chambers in those little locks in those days."

Hurst continued, "Like at Rices Landing. The boat put four barges in one chamber, and took the boat and two barges into the other. Ok. Well always during the Fourth of July we'd have one of those chambers closed down and pumped out. During the coal miner's vacation. So we were doing that at Rices Landing. So the steamboats were piled up waiting twenty-four hours or more to get through the lock. Ok. One of the Carnegie-Illinois Steel steamboat came from up there. B___ W___ from Lock #4 was captain. Nice summer day, low water, he just shoved the empties up on the bank there across the river from the lock, below the lock. He told the mate, 'You know we're going to be here twenty-six hours.' All the boats in the deck room carried a wooden skiff, a yawl. He said, 'Have the deckhands scrub that thing out, it's getting pretty dirty, pretty filthy.' So the mate told the deckhands. 'You know, while we're laying here, scrub the yawl out.' No they wouldn't do it. It's in the contract that the boat has to be tied up before

we do that. The mate told the captain, B___ W___. He had the deckhands carry a big long line clear out to the head of the tow and tie the tow off to a tree. He said, 'OK now the boat's tied up clean the goddamn yawl!' [Laughter] That's how bad it got. Them guys worked themselves right out of a job. At Dravo it got so bad they had so many lawsuits against them, and I don't know where they got their juries. We had a deckhand...the steps leading into the front of the boat. The boat was in the sand trade. I worked for Dravo as a striker pilot. I was still working for the Army Corps of Engineers, I had got my pilot license. One of the pilots was getting ready to retire and was using his sick leave up. He would be off for a week at a time here and there. We had a fellow who was in charge of the boats was trying to make a name for himself. He would put me up in the pilothouse. Now the captain would go home and I would be there by myself. But he wouldn't pay me the money. He just kept me as a deckhand. I told him three times, B___ it's not right. If I'm not going to make the money here I'm going to go where I can. My father-in-law was a pilot with Dravo. They were getting ready to go...in them days you worked ten on and five days off. They were going to go over to seven and seven. So they would need another crew for each boat. Dravo was running five boats at the time. So they hired me as a striker-pilot."

Once the diesel boats had overtaken the steamboats as the dominant form of river transportation, abuse of union privileges continued. Greg Hall told the story of how a pilot rigged an alarm system instead of hiring a second engineer on a diesel boat. "But then here the union got together and they found out, by their maintenance crew on the shore, that a pilot had rigged up [an] alarm system... they was down to one engineer then. They got rid of the one engineer. I worked for a long time by myself, just one engineer.

And boy an alarm would go off and I was coming down there make a correction. I wasn't there after there was no engineers. Sometimes I'd go down and the engine room would be full of steam, I'd think, Uh-oh, water pump is gone! So I'd shut her down and run on one engine. Lot of time we operated on one engine cause they had...they'd have to replace the valves on one side so I'd ask the captain, So we going to be running on one engine? Maybe we worked 18 straight hours changing that head on the down engine to get it back in operation. That was tough...hot."

Scott Hurst had a problem with an engineer. "I had an engineer, there was something wrong with him. He was sick. I was scared to death he was going to show up one day with a shotgun and clean house! He was a sick bastard. And the office wouldn't do anything about it. What happened, the tow boat usually only worked twelve hours a day. We usually tied up from midnight until eight in the morning. When they needed the boat around the clock, we worked like the commercial boats, six hours on six hours off. That's when you made good money. Cause we worked twelve hours a day, it was time and a half. Well when we did that, I really didn't care how the engineers worked. You know. The pilots worked six on and six off, because that was enough time in the pilothouse. The engineers were different. They could take a little nap really. So, this one engineer wanted to work twelve hours straight and go home. He didn't like staying on the boat. He lived in Clarksville. On the *Chartiers*. He was one of the last engineers I had. And, the second engineer came to me one day and said, 'You know, Jr. I'm getting too old to work twelve hours straight.' He was couple years older than me. And he said, 'R___ wants me to say that I want to work twelve hours straight too, and I don't want to do that.' So what could I do? I just called R___. I said, R___, from now on when the boat works

around the clock, everybody works six hours on and six hours off. Well he didn't like that. He would come up with the damnest things. Any time he had to work six hours on and six hours off... like one time he wrote a letter to the Ohio River Safety Division. Every little thing he could find on the boat that was against OSHA regulations. He wanted lighted exit signs over every door on the towboat. It was simple, silly. The guard chain he said was two inches too low, he wanted that raised up. Well, OK, we did things like that. But he cost the government a lot of money. When I retired and went to Arizona, I had to come back for his trial. He was suing the government! He claimed that they wanted him on the boat around the clock. They didn't ever want him going home. So he wanted paid twenty-four hours a day. They called me back and paid my way back from Arizona to testify at the trial. Well that was about the second time he had done that. Well every time, they found against him. They had to get a federal judge in and lawyers from the Pittsburgh District and have that trial. It lasted about a week. They had to pay my way back from Arizona. They told him, 'R___ you're wrong.' They always ruled against him, but they wouldn't do anything about it. So the next time he had to work 6 hours on and 6 hours off, he started all over again. So I had enough of it. The superintendent of the repair party finally...he was a bastard too, he was the biggest thief the government ever hired. And he was always jealous because the towboat master made more money than he did. So he finally talked his way into making himself boss of everything, even the towboats and that. Him and I didn't get along. He not only tried to tell me what to do, but tried to tell me how to do it. He fancied himself as a pilot. And he wasn't you know. So between him and that engineer I retired on my 55th birthday and went to Arizona. I retired in 1983."

With the union, changes in benefits occurred over time, such as those lost by Greg Hall. “We had a union, we were supposed to have health insurance. It got so that they done away with that and even took our glasses away. After all them years, I took twenty years, I took my pension. They said if you take your pension you can’t work on the steamboats. “What do you mean I can’t work on a steamboat? That’s not right.” They said Ok but I got \$325 a month all them years. That’s the river! The river was just a [speck] according to the Maritime Service on them ships. We were just like a pain in the butt to them. I think we’re up to \$400 or something now.”

Feelings of resentment were common with those who had worked through the steamboat era into the time of the diesel boats. They felt as though the union had turned their back on the towboat crews. Greg Hall said the union had become more oriented toward, “ More or less officers, you know marine officers more deep sea.” The push towards a deep sea shipping focus for the union had many believing that the cuts to benefits was a result of this.

“Master, Mates, and Pilots,” Justin Wilson said. “But see their union, Master, Mates, and Pilots went broke too. NMU was the strongest union, they had the most people. But see, most cooks and chambermaids was all in the National Maritime Union [Seafarers International Union of North America, 2001 merger] when I was on the river. I knowed the engineer’s union practically went broke, they cut their pensions way, way, down. I got a buddy of mine, I haven’t seen him for years, his pension hell, they took \$300 off him, I think it was the last time I talked to him, that was about eight to ten years ago. I heard they practically went broke.”

Diesel Towboats and the End of Steamboat Era

Greg Hall said of the demise of the steamboats, “Well at that time too the war broke out and at that time I could see where the steamboats were going to be phased out. I could see that. Ok, they were cheaper to operate and it wasn’t overnight.”

Nolan Connor recounted when the first diesel boat came up the Monongahela River. “Dravo (Corporation Neville Island) started building diesel boats. The first boat to come up the Monongahela River...*Victory*. If you want to get more on that D___ F___ worked on the *Victory*. It was the first to have port holes on it. Anyhow he started up the river with six barges of coal and started back down again. All the boats at this time were steamboats except for a man named Z___ . His was a diesel boat with a screw and he used it for towing concrete and scrap. It had one of those giant magnates on it. Z___ would be out there right in the middle of the steamboats and we'd have to watch out for him. He had his station posted. Like in the pilot house the coast guard would send a letter letting the captain know that lock and dam so and so was under repair, or that they would be dredging here and there on the river.”

Justin Wilson told the story of “Pinhead R___” and engineer who knew the steamboat era was coming to a close. “They had an engineer by the name of Pinhead R___ . He was an old steamboat guy, you know what I mean, from way back. And he said the last trip we made, we brought six coal down from Isabell Mine and we tied up across the river there at Marine Ways in Elizabeth. We had a place where we used to tie loads and stuff off. And he took her over to the landing at Marine Ways, and that was our last trip. And they said, 'Tie her up and cool her down. We don't know if this is going to be her last trip, but we think it is.' But we had to do, like, in other words, we had to cool her

down slow you know, and work the water out of her and stuff like that there. Work the steam out of her. You just run the wheel real slow. So me and him was sitting back in the engine room. And he said, 'Listen. They ain't fooling me.' He said, 'A guy told me that this boat will never run again.' So we was sitting there, and he a fifth of whiskey, he went back in the locker. He brought it out and set it on. Just me and him, the rest of the crew was all hopping to get up town. Me and him was just sitting there talking. I wasn't in no rush. And anyhow, he said, 'Go over there and crack them valves, we're just going to run this wheel...we have to run it to get all of the water out of her.' You know, cause it just did what you had to do all the time like as if you were going to go out in a week or so, you know. So we're sitting there and she just was rolling over real slow, you know. And she is just getting lower and lower cause the steam was going out of her. Took so much steam to roll her you know. And when she went [makes sound like steam escaping and loosing pressure]. He said, 'Son, you'll never see this boat roll a wheel again. And you'll never see another steamboat again go up and down this river.' That was the truth. And I was so glad that I got that in my heart because I loved them steamboats. And I was like him, you know. I knowed that was an end to an era right there. ”

Scott Hurst was a captain on the diesel boats for the Army Corps of Engineers Pittsburgh District. He talked about the transition and differences between the steamboats and the diesel boats. “Yeah. I missed ever piloting a steamboat. And you know, people don't realize this, but when the diesel boats first came out, the steamboats were better boats. None of the pilots wanted to go over to the diesel boats. Well the diesel boats, the early ones, were under powered for one thing. They only had one set of rudders...steering rudders. Well there is in high water, with the low power, the sharp bends on the Mon

[Monongahela] River. You didn't try to steer them, you'd end up on the river bank...they had steam engine assist that you just turned a lever and the pilothouse spun. The first boat I worked on, the *Tennessee*, was a diesel boat. It was paddle wheel and it had a pilot wheel like that, but it had an electric motor that turned. The old steamboats had a brake on them too. Cause you had to put that brake on to hold it in position. If you didn't, it would get away from you when you backed."

Personnel and Deskilling of Labor

When asked how the diesel boat changed the nature of work on the river, Scott replied, "They went over to diesel boats, they didn't need as many people working for them, you see when they had the steamboats. Today they do the same work with six! But boy it was nice working on the steamboats. Ate good, the quarters...you had the Chambermaid to make your bed for you every day. In the early days of the diesel boats it was that way. Today they just live like a bunch of hogs on those Gutman boats. They don't carry cooks anymore. Breakfast, lunch, or get your own. For the evening meal they take turns cooking. Now it's mostly microwaves. I wouldn't want to work on the river today, I don't think. See the diesel boats were no good at that cause they didn't have flanking rudders. They only had one set of rudders. They steered better coming ahead than the steamboats, but they were no good backing. So that's why the steamboat pilots, none of them really wanted to go over on the diesel boats, the early diesel boats. See the steamboats, their rudders were in front of the paddle wheel, so they were better backing. When they were going down in the lock, if they really wanted to steer, they would start backing a little bit. Keep their stern out and moved their head over, you know."

Justin Wilson understood the economics of the diesel boats compared to the steamboats. “And then see, that's what happened there too on the river. In the '50's they started getting rid of the licensed personnel on deck, like your mates and your engineers in the Engine Room after a while. They put all automatic [controls], they handled everything from the pilothouse. You understand? And then they did away with the engineers even on them Pittsburgh Coal/Consolidated Coal boats. They sent a guy from the Marine Ways on the boats to take care of the, you know, change the oil, do this do that, if anything would happen they send him in. And her dad [speaking of his wife] he worked for the Elizabeth Marine Ways his whole life and that's what they used to do. A crew from the Marine Ways would go right to the boat. See them boats up there now are running and they don't even have engineers on them. No licensed men on deck even, they're just regular deckhands. Doing the same work, you understand what I mean, they did away with all of it.”

Justin continued, “Cause then they could tow bigger tows down and bigger tows up. Was better for them. Then I worked on a diesel boat called the *Humphrey*. She was the fastest thing around. She was 1600 horse power, and I'm telling you she could show! We'd take eleven barges from Pittsburgh to Weirton [WV]. Steam and diesel are different things. You can get more out of steam. But anyhow they was 720 horsepower and they run they pools and shoved these tows that these big diesel boats are doing right now and did just as good a work. But the only reason M_____ that they didn't stay is that it was the manpower. They cut down on the people.”

Justin believed that the role of government inspection played a role in the diesel replacing the towboat. “Another thing is though, see they was under government

inspection, cause they was steamboats. And they had to live more up to rules and regulations and stuff. That was another thing. And they was bigger, and another thing, you take say, we're going to tie up tonight down at Marine Ways. Well a diesel boat you just go in like you automobile and you shut her off. Everybody goes up the hill. Steamboat, you either, if you wasn't going to be in there maybe laid up four or five days, they have to keep somebody on there to keep steam on her. You know, just banking fires, engineer had to be there because he wasn't allowed to leave. You had to have an engineer if you was under steam. And that's another thing see, whereas a diesel boat you just shut her off and everybody goes home. They didn't have to nobody on or nothing."

Talbot Smith recalled how maneuverable the towboats were. "Oh yeah, you just steer. The thing is you can always make a challenge. Let's say Charleroi, Lock #4. You came down there, what are you going to do, what are you going to do? Just flank it in or drive it in? Drive it in! I drove it in you know. But I had a lot of toes sweating, but you made it all right. Never do that again."

"They didn't handle like these diesel boats," recounted Justin Wilson. "These boats today are just like motor boats. When you was on a steamboat, you had a line in your hand all the time. In other words, like if that boat was coming up toward a lock or an empty you had to throw a line and hit a timber head and check him in, pull him in. You had a line on your shoulder where ever you went, on a steamboat. Diesel boats you didn't have to do that because them things can handle, you know what I mean. They can put that baby right in there and hold her right there for you."

The women who worked during the transition from steamboats to diesel boats had to adjust to a new type of work environment. Anne Novak recalled, "I did [work on the

diesel boats]. J&L had that *Trojan*. I worked on that. It was the only one. I liked the steamboats better cause the diesel made too much noise from the engine, I didn't like that. Noise was a factor on the diesel boats with their large combustion engines situated at midships. Sofia Kowalski commented on the noise. "The diesel were [noisy]. See the kitchen was here, the diesel engine was in the middle. The deckhands were up front. Separated. So you had to walk to the engine room, all the noise from the engines! Yeah, a lot of noise!"

Twila Kelly was impressed by the speed and the amount of coal a diesel boat could push. "This was a big diesel boat. We made that trip down south, no paddlewheel boat could keep up with it. It went down there real quick and it come back up real quick. We didn't push four or five barges, we pushed them by the acre! We might have eighteen to twenty barges. You had no locks. Once you hit the Mississippi River, there was no locks, you had open river." She went on to add another advantage to diesel over steam, "Well for one thing, on that old steamboat, everything got dirty real quick. You're forever scrubbing inside and out."

Benefits of a Job on the River

Talbot Smith said of the benefits working on the river, "When I first started as deckhand, I made \$4 dollars a day. That's a twelve hour day. Captain made sixteen dollars you know the difference. The deckhand, we went up, we'd get a raise. But toward the end there we were making big money, the deckhand was too. I figured we were making, a deckhand was making...I'm trying to think. Toward the end we were making \$40 dollars a week. See was...captain was on salary. "

“They had what they called a “Marine Hospital” up at in Pittsburgh up on 40th and 10th street,” said Justin Wilson. “If you got hurt on a boat and even off, like I got hurt in a car wreck one time, and they took me to McKeesport Hospital. Well as soon as the company found that out, they called down there and told them. The Marine Hospital came down and picked me up and took me there. That was a maritime hospital. Well then after that, when they got rid of that, that's when they started getting...the companies themselves. You got hospitalization, you know what I mean. Through the union and everything like that. These guys all got hospitalization and things like that. But it wasn't, when it first started, it was what you know as good. Like in the Mill, you got Blue Cross and all that stuff, on there you didn't have that. But it was...it got by. The union got that for us.”

Nolan Connor was still living at his father's house when he started on the river. “I was living at my dad's house. But it was really good. You worked sixty days and had sixty off. The old boats (steamboats) weren't a party, but the new boats, I'll say the diesels were much, much better. I'm going to tell you the truth, it was bad. I think a made sixty dollars a month. The pay was bad, but I'll tell you, the food was always good. You can't knock the food.”

“Well when we first started I got \$137 a month,” said Greg Hall. “They paid in cash and you got a check number. My check number was 402. Finally I got a rate of \$150 a month. I remember getting my pay, they paid in cash I see that fifty dollar bill and I thought, oh man, I'm rich! Well let's see. I started in 1939, in the early forties that came across. Of course I didn't stay on the same boat cause I was a relief man. Maybe I'd go home for a day or maybe I'd just... 'I'm going to put you over on the *Thomas Moses*.' I'd

say, okay and I'd go work with that engineer. My daddy was master, and that's all he ever done for forty-seven years he worked on the boats. I worked forty some years too."

Sofia Kowalski had a different point of view of the benefits of working on the river. "You're not gonna believe it. Three dollars a day. Eighteen hours. Two o'clock in the morning and get to bed about one o'clock the next morning. Every day you had to work so many hours. When I quit the river, and then when I came back...start working on the river. See I was making in the war plan nine dollars an hour a day. Well later on, when they got rid of the chambermaids we worked on the diesel, I made a \$100 a day."

When asked if working for J&L Steel made her proud, Sofia replied, "No, they didn't pay us nothing. They made slaves out of us. Three dollars a day! When LTV (Ling-Temco-Vought) took over, we got more money. We got a union then. No we didn't get paid...J&L made money off us." However, she then gave some insight into how her job was better than her sister-in-law's father who worked in a mill. "I remember my sister's sister-in-law tell her father, he work in McKeesport, they used to keep them in a factory and wouldn't let him go home. She said, they keep my father in here to work, twenty-five cents an hour. Yeah. See we didn't live like that."

Twila Kelly said of her benefits on working on the river on the diesel boats, "You had to belong to the union to work on the boat. Cause they had them in Pittsburgh, they're called port agents. They don't have them no more far as I know. We had all kind of benefits. That's one nice thing about that company. Union Barge Line was good to us. They had the *William Penn*, the *Jason*, *Reliance*, the *Southern*, *Pennsylvania*, they had a whole mess of boats."

The influence of the unions on the steamboat worker's everyday lives on board the boat cannot be underestimated. The unions became a third party, an entity that placed its power between the crew and the captain. The union eventually took the power of the captain and replaced it with a contract system that each worker followed. The captain, whose power had come from a long established set of practices now was reduced to the role of an "operator" whose authority was contractual, and reduced to that of an employee of the larger company.

Work on the boats was regulated by the contract each union had in place detailing the work structure on the boats. The contract spelled out each worker's role and obligation of duties on the boat. Often the terms of the contract became a point of contention between the licensed crew and unlicensed crew with a union delegate needed to resolve the conflict.

To many of the workers, the benefits of the union outweighed the draw backs. The seven on and seven off work schedule, increased pay and benefits, and contracts that expelled most of the harsh behavior by the captains and licensed crew. However there were draw backs. The relationship of the crew between each other was changed. The attitude of helping each other out, working as a team, and picking up each other's slack disappeared as the contract explicitly laid out each worker's duties. Anything outside the contract asked of a worker could become a point of contention. Many workers that I interviewed expressed a feeling that the unions brought laziness and destroyed the work environment. Worker identity was changed dramatically as each became a contractual employee, the individual, not the crew became the center focus of the union and the familial ties on the boats ended. Shared identity on the boats was fragmented as a single

worker was able to halt work on the boat for contractual infractions. Some of the interviewees went so far as to say the unions stopped representing them, and shifted their focus away from the river to the ocean and lake vessels. These sentiments were compounded by the deskilling and decimation of the workforce brought on by the widespread adoption of the diesel towboats.

Chapter 6: Synthesis

The steamboat industry in western Pennsylvania during the 19th and early 20th centuries was a unique industry originating in the Industrial Revolution and situated in the frontier economy. Worker identity was formed through the relationship of the crews to the workplace and a shared work experience. The steamboat worker stood from other workers against a backdrop of industries such as coal mining and factory work, as the crews were tied to their place of labor, the boat. The boat was not only their job site, but their home for weeks at a time. They developed a sense of family that often took precedence over their own land based families. The steamboat workers did not unionize until the late 1940s due in part to their sense of familial loyalty to the boat and in part due to the isolation of the labor force on the rivers. Unionization occurred due to mounting pressure for better wages, shorter work rotation, and the looming technological transition from steam to diesel towboats. Worker's relationships to each other and their place of work re-enforced identity and long held hierarchies established at the very start of the industry. This pattern of identity formation can be identified through documentary research, archaeological excavation, and industrial ethnography. Ethnography, used here, represents the level of detail of the oral histories. While it was impossible to live and work with the steamboatmen, the level of detailed information gathered from their testimony and the intricacies of their relationship to the technology of the boats is presented in an ethnographic format.

In this dissertation, I break the steamboat industry into three distinct eras, the Early, the Middle, and the Late. After researching the history of the industry, these three

periods each had a strong central theme that was key to their definition. The Early Era (1811-1866) focused on the technological hurdles that river transportation experienced during the first part of the Industrial Revolution. The Middle Era (1866-1918) was a period marked by the rapid expansion of the coal and steel industry in the Monongahela Valley and the increased consolidation of corporate powers controlling river traffic. The Late Era (1919-1950) was marked by worker unrest, unionization, and the introduction of the diesel towboat. Over the course of these eras, the workers went from a loosely associated class of river workers, to a highly skilled workforce, and finally to deskilled employees of larger corporate entities. Ever evolving technological and organizational relationships during each of these eras contributed to the formation of the steamboat crew's self-identities and group identities over time through an ever present tug of war. I will proceed through each of these time periods and their contribution to the identities of the steamboat workers.

Each of these eras represented one facet of the worker's identity and the culture of change surrounding it. The river communities where the steamboat workers lived help form their identity from which it was fostered, shared, and passed on to younger generations of workers through a large apprenticeship network. River work for many of crew members was inherited, they performed the jobs of that some of their relatives held while others learned from the "old rivermen" who possessed the arcane knowledge of how "proper" river work was done.

The first type of data sources this dissertation utilized were those of scholarly and archival documents. By examining the worker's lives from the shop floor, in the case of using documentary evidence such as diaries and newspapers articles, this dissertations fits

within the pattern of the new labor history. It invokes the works of Thompson and Wallace in their studies of class formation within the English textile mills and in the anthracite coal regions of Pennsylvania, respectively. The basis for worker identity formation occurs in the home, the workshop, the church, and the community. In this research, the history of the steamboat industry and the communities it thrived were as important as the workers in the formation of their identities. The socio-economic atmosphere at each stage in the steamboat's development from invention to demise evolved the workers into "rivermen" and "riverwomen". The research focused here goes beyond a documented labor history of steamboat workers and instead takes on a technological and cultural approach to labor history by focusing not only on the documentary evidence, but revealing the building blocks of worker identity through archaeology and industrial ethnography.

The second type of data came from the archaeological excavations of the Captain James Gormley and Captain Michael A. Cox houses. These dwellings offered a unique experience to examine worker identity through the archaeological record. While it would have been ideal to excavate worker's houses, many workers lived a transient lifestyle moving from place to place following the river work. Census data indicated that many steamboat workers, such as deckhands, rented their apartments or homes and only for a short period of time. Landscape, house construction, family composition, and community involvement were important windows into how the captains lived their daily lives, and how they were integrated into the different eras of the steamboat's influence. This type of archaeological study differs from Paul Shackel's (2006) work on Virginus Island where he examined the factory floors of mills; is more in line with Metheny's (2007) work on

miner's double-houses in Pennsylvania. However, the use of archaeological data, outside of the excavation of a steamboat wreck has not been done, nor have there been excavations of this type focused on the workers of the boats.

Oral histories accounted for the third type of data collected and perhaps the most insightful of them all. These accounts brought the lens of observation into the home where worker identity is solidified. I chose an oral history component for two reasons. The first is the passing of many of those who worked on the river during the age of steam, and secondly I wanted to understand how activities, memories, and beliefs contributed to the overall formation of identities as rivermen and riverwomen.

The research presented here opens a new window into the everyday lives of the steamboat crews. This work, I contend is possibly an extension of the work that Louis C. Hunter (1993) carried out when studying the Western Steamboats in the 1930s. However, this work is different. While it is about technological change, the focus is on the workers, who they were, where they lived, and how they coped in a working environment that was also their home away from home or perhaps to many of them, their first home. Hunter's work was an historical account relying on documents as the main line of evidence. In this study documents, archaeological excavation, and oral testimony are treated as equals to uncover the mechanism of transformation of loosely collective group of men, races, and genders, into a strong self-aware class of river workers over a period of 139 years.

The Early Steamboat Era (1811-1865)

During the Early Steamboat Era (1811-1865), the crews on the steamboats had a mixture of identities and little class cohesion. Captains, many coming from the merchant class, viewed the steamboat as one of many endeavors to gain social and monetary status within their communities. They were often foundry owners, businessmen, and part owners of larger packet companies and other boats. More often than not, they paid others to captain their vessels while they attended to their daily occupations. Crews during this early period were loosely associated with steamboat work and viewed it as part of a secondary lifestyle with travel and mobility as a draw. Other members of the early steamboat crews were taken from experienced flat and keelboatmen for both piloting and deck work.

Worker identity during the earliest of the steamboat eras was tied to other occupations. Reasons for this include the novelty of the boats as merchant class toys when the rivers were dominated by flatboats and keelboats, and the lack of year-round employment on the steamboats. River workers, including steamboat crews, during this period were often transient, moving with the jobs from town to town. This is due in part from the long work schedules that the river demanded, months away from home, with little ability to settle in one place. Most crews were made up of single young men with little affiliation to a single boat or company. Many rented their homes in the towns if work was local, such as those working on the packets from Brownsville to Pittsburgh.

The packet steamboat during the Early Era, would become the dominant form of river transportation as the flatboats and keelboats were replaced in the river trade. By the

midpoint of the 19th century, worker identity within the industry was evolving. It was possible to gain full-time employment working on the boats and several generations of workers had toiled on the decks. The packet steamboat offered a variety of positions for workers to hold, and many were racially and gender integrated. African Americans on the northern boats occupied positions of the firemen, roustabouts, wait service, maids, and cooks. Their positions, though menial, offered a black steamboat worker unparalleled freedom unlike any other job. Women too, were integrated into the microcosm of the boats. Chambermaids, laundresses, and cooks, were all necessary to keep the boat in good order for the passengers and crew. While boats may have been a racially and gendered workspace, the boats were designed to keep the women in certain sections for work and sleep, but also keep the blacks in segregated areas toward the back of the boats.

Contributing to the full time employment of the river workers was the construction of slackwater improvements in the form of locks and dams that continues up to this day. Without the ability of year round work on the river, the role of the steamboat crews would have been seasonal, leaving little room for the cohesion of identity formation. The locks and dams help create their own class of workers who in conjunction with the steamboat crews, created a culture of industrialized river work and hardened the identities of the “rivermen” within that environment.

The transient nature of the Early Steamboat Era was reflected in the archaeological remains of Captain James Gormley's house on Bank Street, in Brownsville, Pennsylvania. The search for workers housing in the census records of the 1850s to the 1860s revealed that many workers rented their apartments or homes for brief

periods. The captains of the steamboats lived a more settled lifestyle making sites for excavations more identifiable.

As a steamboat captain, Gormley's house was constructed in an impermanent manner with a dry laid stone foundation, shallow footers, and wood frame. The house was utilitarian in nature, enough to provide shelter for the Gormley's wife, children, and others who lived in the house while he was away for long stretches of time. This fit into the transient pattern of the steamboat industry during the Early Era. As the deed research alluded, James may have been renting the house or had some other arrangement from his relative John, while James was preparing for a new life in St. Louis.

From a landscape perspective, the Gormley house was built on a small bench overlooking the Monongahela River and within several hundred feet of the Brownsville Wharf. In the 1850s, this section of town was mixed social-economically. During the first part of the 19th century, the area was an upper class neighborhood where Daniel French once lived. By the 1850s it was a neighborhood of laborers, river workers, and merchants. The most prominent houses were located on Prospect Street high above those on Bank Street where the Gormleys lived.

Captain Gormley falls within the pattern of the Early Steamboat Era. His business interests were invested in the steamboat industry across several states. He was known for having boats built in Brownsville and St. Louis, and he was part owner of several other boats not directly under his command. Advertisements from the 1850s in St. Louis advertise his piloting skills for trips to New Orleans all the while keeping his home in Brownsville. The lack of documentary evidence of his life in Brownsville may be the result of documents not surviving into the present or may indicate his lack of integration

within the town. Brownsville was, after all, a stepping stone for Gormley as he made his way to St. Louis after the Civil War.

The end of the 1830s saw a split in technology that redefined the river commerce landscape with the invention of the specialized towboat. The importance of that technological split would not be felt in the packet trade until the end of the Middle Steamboat era. However, like all shifts in technology, the towboat brought a new work lifestyle that was centered on the pushing of coal barges and other large freight items, such as steel beams or liquids. The towboats were insignificant in numbers during the Early Steamboat Era to present a threat to the multipurpose packet steamboats.

The Middle Steamboat Era (1866-1918)

After the Civil War, the period of Reconstruction boosted the need for packet steamboats as resources were realigned to help the war-devastated south. The packet industry during this period was facing increasing competition from the railroad especially after the completion of the Transcontinental Railroad in 1869. The railroad was effectively taking away both freight and passenger service from the packet companies as they struggled to lower fares and increase patronage. Mak (1972) examined the economics of the shipping trade after the Civil War, however, studies are lacking examining the loss of shipping in the Monongahela Valley due to the shift in broad based manufacturing economy to a single economy based on extractive resources such as coal.

The pressures affecting the demise of the packet companies was the coal industry and railroad competition. The packet boats and their corporate structure of small investors, such as owners of the boats had little capital and narrow margins for

operations. Large capital investments were nonexistent like those of the railroad or the steel industry. With river transportation waning, the packet companies had little outside funding outside of ticket sales and ever dwindling freight charges.

After the Civil War, coal became the central focus for the new period of Reconstruction as large steel works and iron foundries were built. The steamboats went through a technological transition with the proliferation of coal gave way from wood fired boiler to the more robust coal fired marine locomotive boilers.

While the packet companies survived into the very early 1900s, the towboats were becoming the industrial focus on the river. Hendrickson (1957) notes the technological advantage of the towboat over the packets “the towboats were being used as ice breakers on the river.” The packet boats were sidewheeled, with two paddlewheels on each side of the vessel. These wheels were prone to damage by ice, and could be broken apart easily. The towboat on the other hand was a stern-wheeled configuration, with the wheel at the back. Ice would skirt around the sides of the squared off bows with little interference to the paddlewheel. Towing on the river during periods of ice was common whereas the packets were unable to utilize the river until the ice was broken.

The steamboatman's experience during the Middle Steamboat Era was under constant evolution. At the early part of the era, the average crewman was hired and employed by the captain who had a stake in the boat. The captain represented a small company of merchants who sold out the boat for freight and passengers, or if you operated a towboat, out to a local mine for towing. The fierce competition with the railroads and a drop in river shipping after 1880, the average worker found themselves working for larger corporations (Peterson 1930). Captain Joseph Hendrickson writes in

his diary about selling stock in a packet company, “Strange if they get any fools to buy stock now” (Hendrickson 1957).

No longer were the captains the business end of the boats during the middle era, at least on the towboats. They were now “employed” by the corporations such as US Steel, Jones and Laughlin, and Crucible. Their authority could be challenged by the new structure of the yard office. The captain's role was fixed by the company. He was in charge of costs associated with the boat, such as operating supplies, food costs, deck tools, and employee payrolls. The captain was able to hire workers and fire workers at will.

The towboat crews became a working class as coal and steel companies began construction of the single purpose boats. The era of the blue collar river worker set a stark contrast to the packet boats with their wait staff, stewards, and of course the gentleman captains who were part owners of the boat. The crews of the towboats were dirty, hardworking, individuals who worked in dangerous environment, for a captain who represented a larger corporation. The process that the steamboat crews went through mirrored in some aspects, those that the miner's experienced in Anthony Wallace's (1987) *St. Clair*. A dangerous work environment coupled with almost tyrannical management, fueled much of the unrest of the steamboat workers that later manifested itself through strikes and boat tie-ups during the 20th century. The back pressure of the towboat crews against low wages and long work hours helped shape their identity and solidify their cohesion.

Archaeologically, the focus on the captains gave evidence of this transformation as industrial capitalism overtook the frontier economy and steamboat industry became

commercial. Living during the Middle Era was Captain Michael Armacost Cox, who represented a person in the transitional phase. Captain Cox was raised a merchant and followed the Early Steamboat Era model until after the Civil War. Unable to fit into the new corporate categories of towboat captains, Cox instead diversified his career. He owned a boatyard in Brownsville where he built both packets and towboats as early as 1870. He sat on the board of the local bank which had holdings with local coal mines such as Umpire Coal Works and Snowdon and Hogg. Cox used his mercantile background to purchase packet steamboats, become a board member of a local bank, purchased land in West Virginia, and by investing in the new corporations that were consolidating the steamboat industry into an industry owned by mines and steel mills. Cox integrated himself into Brownsville society by joining fraternal organizations like the Free Masons and Commandry.

Cox lived on Church Street, an upper-class neighborhood in Brownsville that was one of the centers of the merchant class. His house, as discovered during the archaeological investigations, was constructed in a different manner than Gormley's. The Cox house possessed a river cobble foundation and was built of brick giving it the feeling of heaviness, of permanence. The artifact assemblage was typical of the late 19th century upper-class, with colorful pressed glass tablewares and fine china.

Captain Cox was known for being the safest captain on the river, and held licenses for all of the major tributaries of the Mississippi to New Orleans. How he would have identified himself as a riverman or steamboatman poses an interesting question. On the one hand, he was perhaps one of the most well-known of the “old rivermen” in Brownsville. His name was often mentioned with the likes of Adam Jacobs, Isaac

Bennett, and E.D. Abrams. Cox would have also known Captain Gormley, as the industry was tightly knit between the packet companies.

Michael Cox would have taken the term riverman not as a moniker of his class or identity, but more of a title bestowed upon him. His life was different from Gormley's who had not only a business of piloting around Pittsburgh, but also an active business in St. Louis captaining various boats as far south as New Orleans. Cox was rarely away from the central workings of the packet companies rooted in Brownsville. This allowed for his integration into the politics of the town, diversify his business holdings, and become an active member in the local Free Masons. From an identity standpoint, Cox was a capitalist. He understood the frontier economy was passing after the Civil War, and a new extractive, industrial capitalism was replacing it. He was an activist in getting the tolls removed from the Monongahela River, and probably took notice when Andrew Carnegie built the first steel mill in Braddock in 1872.

Michael Cox's experience of working on the river contrasts with that of Captain Joseph Hendrickson. Hendrickson piloted for Cox on the *Germania*, *I.C. Woodward*, and *Adam Jacobs*, and many other of the packets in the Pittsburgh, Brownsville, and Geneva Packet Company. However, Hendrickson also piloted towboats when the packets were laid up due to low water, lack of business, or ice. Hendrickson works every day that he can, sometimes spending thirty days or more on the boats. He takes the water height daily and visits the wharf when his boat is tied there. Toward the end of his career, Hendrickson accepted any job on the river, even for only one day. He made several trips with coal from Brownsville to Charleroi and other close river towns on the towboats.

Joseph Hendrickson lived in a middle class neighborhood on Cass Street in Brownsville, just east of the prosperous and wealthy Front Street. From his diary, he lived in a three story house with two lots of property. His diet, according to his journal, was mainly from the vegetables and fruit that he raised in his garden, and the few fruit bearing trees in his side lot. When he was sick, the International Order of the Odd Fellows paid him a sick benefit of a few dollars a month. Hendrickson was active in the community, not on the level of Michael Cox, but during times of hardship, his fellow rivermen helped him and his family out by helping around the house or taking him places. This type of involvement from the community detailed in Chapter Three was a testament to his social capital of being a captain.

Hendrickson had no outside investments, and received monies from the boats that he worked on. He referred to this as “getting paid by the boat.” His language strikes a chord, because he was not acknowledging his money coming from a company or corporation, but rather he was getting paid by the boat. Sometimes he writes that the “boat owes him” for so many days of work. As a captain and pilot, Hendrickson was making a reference to how he sees the boat as an entity that encapsulated environment that those in the oral histories acknowledge. Hendrickson understood the work ethic that later interviewees would talk about, being able to do other's jobs, and being able to work as many positions on the boat as your training allowed. Hendrickson was a captain, a pilot, he held an engineer's license, and also worked on the deck if jobs were scarce. At one point when work was hard to come by, he works on a dock.

Michael Cox was a captain, a capitalist, and made money off of the rapidly industrializing Monongahela Valley. Unlike Hendrickson, he probably identified with

whatever role he was currently acting whether that was on the bank board of directors, in the pilothouse, or building boats. In contrast was Joseph Hendrickson, a captain and a pilot with one foot in the Early Steamboat Era, and another in the Middle Era. His identity was in a period of transition as he had to work for wages and take jobs on the river when they were available. He would have identified as steamboatman or riverman, and I believe he saw that the packet lines were a branch of the steamboat industry that would sooner or later be phased out and replaced by the towboats.

By the middle era, there were two different types of captains on the river. There were the captains like Cox and Hendrickson who worked for the packet companies and commanded the large sidewheeled steamboats with all the luxury of a trans-Atlantic cruise. They were part owners of the vessels, and made money when the boat made money. However, there was a second type of captain on the river, the towboat captain. He may have come more from Hendrickson's background of working both on the packets and on the towboats as needed. As time went on, the corporation hired captains specifically for the towboat fleets. These captains were paid a wage from corporate earnings, they answered to a wharf boss who may have moved up through the ranks as an experienced captain.

The Middle Steamboat Era was the period that worker identity was solidified on the river. Corporations that annexed huge capital as the coal and coke industry dominated the economy of the Monongahela River Valley. From a technological standpoint, the packet industry was fading with the competition from the railroads and lack of capital investment. The towboat under ownership of mines and larger corporations were becoming the backbone of river transportation for shipping.

The Late Steamboat Era (1919-1950)

Community structure played an extensive role of shaping identity for river people. Many, as mentioned before, lived in small towns situated along the river. Some of those towns, like the Lock #4 community that Scott Hurst grew up in or Brownsville where Nolan Connor was from were deeply integrated with the river as a work place. Boatyards, locks, coal tipples, and wharves anchored these communities and provided necessary jobs to their inhabitants. The landscape arrangements in many of these towns intermixed working class neighborhoods. Coal miners lived next to factory workers and steel workers lived in localities with steamboat workers. It was not uncommon for captains and deckhands to live on the same street or in the same neighborhood.

Working-class identity for many of those interviewed began in their communities at a young age. Many remember listening and identifying the steamboat whistles as the boats came up the river, or went into the locks. “I was born and raised on the bank, the river bank,” proclaimed Talbot Smith. The enormous boats towing their barges of coal influenced the imagination of life on the river for some of these children. The steamboat crews often times threw fruit to the children who swam out to the boats, or blew their whistles as they went by. These children, born in the 1920s, were growing up during the Great Depression. To see these clean white boats plying the river with their deck crews scurrying about on made impression especially to those whose fathers were working in the coal mines and mills.

Identity of a steamboatmen was further reinforced at home, as a few of those interviewed had family members who worked on the boats such as Justin Wilson, Greg Hall, Scott Hurst, Anne Novak, and Twila Kelly. Mothers, fathers, aunts, and uncles all

contributed to the social and work identity of these men and women. Growing up in a family that had ties to the river reinforced the social standing of that family as river workers. Anne Novak called it, “a steamboat family”.

The home was a safety zone, a place where a river worker was firmly planted on land. On the boats he or she was under the constant authority of the captain. Unable to escape the work place, the home was a shelter where workers exercised their freedoms and had control of their own lives, at least for part of the month, until they went back to work again. The home was the place where your wife or husband lived, where they took care of the house and the bills while worker was away. However, the home could also be a point of contention. Talbot Smith mentioned that even though his wife was sick and bedridden, he had to leave his problems at the “kitchen door” when he left to work on the boats. After all he said, “I had to work with captains”. Justin Wilson believed his long absences away from home and his wife strengthened his marriage. He said, “If it wasn't for me working on the river, seven on and seven off, I'd never been married as long as I was. Me and my wife we have our time, she has her time, I have my time and we have enjoyed each other that way”.

To be a river worker was to have to abide by the work schedule of the boats. The time expected for a river worker to put on the boats before unionization was sixty days on and sixty days off. That shift schedule changed to ten days on and five days off, and then eventually to seven days on and seven days off where it is today. The work schedule of a father laboring on the river meant missing holidays and family events. Greg Hall missed much of his son's growing up and placed that burden on his wife. Hall's son would later admit he didn't follow his father to life on the river because of the time away from home.

Rivermen missed graduations, weddings, and family member's funerals. Greg Hall's father passed away while was Greg was working on a boat. Talbot Smith's wife passed away as well. The expectation of missing important life events was formative in the identity of the rivermen as well as accepted.

The river community to some extent provided an ambiguity to the rivermen who often times negotiated their identities by participating in social functions or clubs. Nolan Connor for instance, was a member of the Lion's Club and Greg Hall was a Freemason. Pubs located by the landing were the favorite hangouts of the men after getting off the boat after a shift change. Licensed and unlicensed personnel mixed freely, and captains would sometimes buy their crews a round of drinks. Bars were a stop-gap for rivermen before heading to their homes. The bars located at the landings were more than eager to serve the men.

In some communities the preconceptions of river workers preceded them. Local bars and clubs could be off limits to a riverman if he knew he and his friends were not welcomed there. They were viewed as rowdy, transient drunks and trouble makers by some communities. Women who worked on the boats were often the focus of prejudices in the local communities earning the title of "tramp". This was partially due to their working with all male crews and living aboard the boats.

Steamboat workers served two communities, the land based community where they and their families lived, and the boat as a community where they worked and lived for weeks at a time. This dichotomy was a constant struggle with those working on the boats. This duality in their lives set the riverman apart from the other forms of worker in the Monongahela Valley. A coal miner or mill worker went home at the end of the day.

They could walk off their job if they didn't like it, or escape to some part of the mine or factory to get away for break or breather. The steamboatman was tethered to the job site both day and night. There was a feeling of isolation out in the river, especially since many of the workers were not told their destination or stops the boat was going to make. Escape from the daily drudgery of work by going home to a husband or wife was impossible for those that worked on the boats.

Greg Hall summed up his experience with his fellow crew mates by calling them family. He and others who were interviewed called the boat their “home” and their crew mates a family. The steamboat was a self-contained community producing its own electricity and drinking water. The crews were isolated in the river, each boat representing an encapsulated work ecosystem. No two boats were alike even though their crew positions were the same. Workers placed an enormous amount of pride into the boats that they served on. The steamboat would take on its own persona, “she was the fastest” or “she could tow the most” were common. Also a common point of pride was the cook who served on the boats, “our boat's cook made the best pie”, “our cook made the best steaks” or “our boat had the best food”.

The common belief that the steamboat was a home and the crew were a family is pivotal in understanding the worker identity that represented the steamboatmen. The boat was an active player in the creation of this identity as the men worked and lived on the boats. The boats themselves was named. The engineers who I interviewed talked as if the boat was an individual and each had its own traits that had to be recognized in order to operate it correctly. Captains understood that each boat handled differently and performed differently. Like the crew, the steamboat had a personality, it was a unique

actor in the lives of the workers. More importantly, this idea that a boat was an individual was ingrained in the minds of the river workers at a young age, when they would compete to identify specific boats by their unique whistles (voices). The boat then became a solidifying force in the worker's identity and an active player, "the steamboat was in my heart".

It took a certain type of person to work on the river, to give up their freedom for sixty days at a time in the 1930s. Steamboatmen had to be "tough" and had to "marry the job". There was for some, like Greg Hall who loved the steamboats from when he was a child, or Justin Wilson who had the river mud in his soul and "just fell in love with those boats". For them, their work on the river was more than a job, they had to navigate a hierarchy of command that hailed from the flat and keel boat days. They had to learn to work with others as a cohesive unit, obeying the commands of the captain and mate.

The workscape of the steamboat was arranged with the captain and pilot forward occupying the best cabins, the cooks were berthed amidships, and deckhands and firemen berthed in the aft section. This arrangement reinforced ideas of authority and rank on the boats. The lesser ranked individuals had quarters above the engine room and outside of the paddlewheel. The panoptic pilothouse stood high above the decks where the captain could not only maneuver the boat, but could keep a watchful eye on the deck crews ensuring that their work was being carried out.

This spatial hierarchy on the boats was arranged for efficiency of work and reinforced the power structure of command on the boats. The crews lived in a monitored, managed, timed work environment. Timing was crucial on the boat for basic operations. Steam pressure was gauged and timed for throttle, firemen timed their shovel loads into

the furnaces, deckhands timed the lashing of barges, and pilots timed their locking and flanking maneuvers.

Crew identity was reinforced through the apprentice training programs that taught the individuals their place on the boat and more importantly, their jobs. The command chain was replicated as crew members moved through the ranks on the boats. Not all men wanted to be in charge of the boat or be a captain. Justin Wilson felt as though he lacked the education to be a captain and preferred not to have the responsibility.

Wilson's position on the boat, like many of the other personnel except the maid and cook staff, was flexible. It was not uncommon for a striker-engineer to also act as a deckhand on a different boat or subsequent trip. Some deckhands were used as coal passers, and even as Talbot Smith retold his own experience of being a pilot and then having to be a deckhand when jobs were scarce. This flexibility of the workers to perform other tasks on the boats allowed them to take jobs for other companies when work was hard to find. The flexible job assignments were a contributing factor to the spread of unionization as workers “cross pollinated” other companies’ boats such as Hillman and US Steel. However, flexibility of labor roles was also a central factor in the transition to diesel boats.

The command structure on the steamboats during this time period started with the captain, mate, pilot, and the chief engineer. These positions comprised the licensed crew where each man had to pass a written or practical test within their certification area. These positions were not interdependent. It was relatively uncommon for a captain or pilot to have any engineering training or to have spent amount of time in the engine room outside of the striker-pilots. More ambiguous was the position of the mate. By

certification level the mate is the second in command of the boat. However, by practice, the pilot was often called upon as the second in command of the vessel. The mate served as a sergeant, someone who was out in the thick of the weather with those under his command working with them to get the job done. The captain gave the mate orders which were passed down to the deck crews for them to be executed.

The captain was the “bastard in the pilothouse”, the “head hog”, or the “son-of-a-bitch” who gave the orders to the crew. He was the king on the boat and his authority went unchallenged. The persons interviewed above each had a different opinion of the captains on the boats. Some were fair, some were manipulative, and some made working on the river a torturous journey. If there was a grievance before the union, it had to be taken up with the captain. He had the ability to hire and fire crewmen at his discretion. The captain, although he may be the scorn of his crew had to balance discipline and reward to keep his boat functioning and productive. Some captains did this by providing alcohol to their crews when they were tied up, or buying the first round of drinks at the bar after a crew change. Sometimes the captain would ask crew members as they “went up the hill” to bring back alcohol as some of the captains were known for their penchant for drinking.

The authoritarian figure of the captain paired with the foul mouthed, ill-tempered mate, help forge the identities of the crews working on the steamboat. When interviewed, nothing brought about more impassioned feelings than when they talked about the captains of their boats. This power structure reproduced worker identity by creating a solidarity of an “us” verses “them” mentality. These bonds were replicated on each of the boats as captains pushed their crews. Stories of painting the boat in the rain or having a

crew member pushed into quitting their job was common. So too was the commonality that there were benevolent captains. Those captains who turned a blind eye to crew indiscretions such as alcohol consumption or frequent breaks were remembered as easily as the tyrant captains. Many of these “good” captains rose through the ranks from deckhand to licensed crew. They were looked at by the other crew members as “just like us”. Talbot Smith was one such captain and understood the needs of his crew. He often identified himself during the interview as one of the guys. He started as a coal passer and worked his way to captain.

Steamboat worker often adopted the work ethic and their positional identities from those they apprenticed with. The older members of the crew such as the chief engineer, pilot, or even the captain became the role models for behavior on the boats. The cooks on the boats were usually older women who took the young chambermaids under their watch. The deck crews and striker-engineers were often young men entering the work force for the opportunities that mill or mine work did not offer. One of these opportunities, as Anne Novak succinctly put it, was life on the boat was “freedom”. As a steamboat worker, the chance to travel, perhaps as far as New Orleans from the Monongahela Valley, was a dream most heavy laborers could only imagine.

The price for this type of freedom was a dangerous working environment often exposed to the elements. The boat ran twenty-four hours a day, seven days a week in rain, snow, hot, and cold weather. The young men working together through rough weather in a dangerous environment on a day in and day out basis formed a cohesive working unit through male bonding. Most of these men had similar socioeconomic backgrounds that transcended their ethnicity which, as mentioned above, resulted in their behaviors on and

off the boats. The dangers of cables snapping, boats tipping, collisions in the fog, and a whole host of dangers from inclement weather helped shape an identity of fist fighting, cursing, alcoholic, rabble-rousing, rivermen who feared no danger. This cavalier attitude toward danger on the boats was present in the interviews. Justin Wilson said, "Everything on a steamboat was hard and tough. That's why steamboat people got a bad rap because way back going to the Depression. Most people who worked on the steamboat didn't have no families or anything else, they was just roustabouts."

When a dangerous situation arrived, it was up to the crew as whole to deal with the situation. When Talbot Smith ordered his deckhands to cut the tow before his boat went over the dam, they were ready and acted quickly to save the boat and themselves. This shared experience that the crew went through strengthened their cohesion to each other and to the boat that was not only a place of work, but was also a home.

The crews working on the steamboats during this time were usually second or third generation Americans with family backgrounds from all over Europe. African Americans, if present on the boats on the Monongahela River, were often relegated to the fireman position. Most companies at the time hired few blacks to work on the boats and many of the interviewees had not encountered black steamboatmen or cook staff. However, Greg Hall had while working in the engine room on one of the boats. In his interview, Greg painted a picture of an integrated workforce on the boat where everyone worked together and joked together. This ideal representation has not held up under further scrutiny. Blacks working on Greg's boat had their own berths and were not integrated with the white firemen. They had their own table, at the back of the engine room with a light where they played cards and took their meals, well away from the galley.

The position of their table would have smelled of oil, been hot behind the boilers, and perhaps noisy as it was situated behind the machinery. Had there been more of an African American workforce on these boats, further research into how their identities as workers formed compared to their white comrades would make for an interesting study beyond the scope of this work. However, I can only speculate that as part of the steamboat crew, blacks worked as hard if not harder than their white counterparts due their increased visibility by those in command and the scrutiny of their fellow workers.

Women who worked on the river had a different experience of home life and their place among the river workers. The cooks and chambermaids often were in their 20s and unmarried. They worked on the river until they married, then usually left the boats for a more settled lifestyle. The women I interviewed never intended to make a career out of river work. Instead, they likened their jobs to housework they would be doing otherwise. While many women did make successful careers out of river work, once many of them married, river work was abandoned.

The steamboat as an industrial work place was an early adopter of gender-integrated work much like the textile factories, where women played a significant role. The women on the boats provided a necessary service of cooking and cleaning for the crew. Cooks were usually older women who worked their way up from chambermaids. Some of the cooks on the boats became renowned for their culinary abilities and were known by other crews as making the best pies or meatloaf. This reinforced worker identities within the culture of a boat especially when many of the crews felt the boat was an object of pride.

The women who worked on the boats occupied a social standing best described as separate but equal. They were equally an employee of the companies that ran the boat, but their positions within the boat set them apart. The men on the boats had restrictions on interactions with the women, enforced through rules and regulations. The women were much less likely to suffer the wrath of a captain and in some instances were coddled by them. The cook and chambermaids worked a different schedule from the rest of the crew. This ability to move weave in and out of the established hierarchy gave the women on the river a unique social standing and identity. The women were more radicalized and more able to organize and inspire the men toward unionization.

Post Unionization 1950

Unionization of the steamboat crews was a slow process for an industry that was born in 1811. Some of the reasons for this was expressed by those interviewed; the steamboat was like a family. Many of those crew members did not want to talk about the union, they simply brushed off the question or gave simple responses. The crew's dedication to their work was not tied to the companies they worked for, but rather, it was tied to the individual boats they served on. To complain about their jobs, to admit that the work was unfair or too hard, was a complaint against a roof over their heads and three meals a day. A complaint was viewed as grievance against people you spent twenty-four hours with, shared your meals with, and played cards with.

The very nature of working on the boats made unionization difficult. Each steamboat was a unique work experience, with different crews under the guidance of different captains. Each boat was an encapsulated community with its own personality. While the work was the same between the boats, the social experience of individuals could be different based on a variety of factors. In order to get a company to give into unionization, the crews on each of the boats had to agree to organize. Union sentiments on one boat may not be the same on another. Therefore each boat then became a battle ground for and against unionization.

Unionization as described by many of the interviewees was not a uniform process. With the threat of organization on the river after several longshoreman strikes in the 1930s, companies created artificial barriers to prevent the spread of union sentiment. On such policy was that boats of certain companies were not allowed to have communication

or fraternization between the crews. These restrictions were often ignored as organization of one boat began spreading to another. Non-verbal communication such as banners crafted of bed linens were hung from the railings of union boats. Some boats refused to tow coal barges for companies that were against unionization. Boycotting of non-union coal companies such as Hillman was common. Acts of militancy often occurred with crews of union boats boarding and fighting non-union boats.

The companies lost to the unions, one boat at a time. While militancy and organizing was shutting down and tying up boats on the river, the companies were losing the fight in the communities. Beer gardens, churches, the home, all became battle grounds for unionization. Rivermen intermingled with coal miners who were fighting for their own rights in the late 1940s. Nolan Connor recalled how John L. Lewis, who was inspiring the coal miners had also inspired the river workers to walk out, strike, or to tie up the boats. While Lewis did not speak directly of the rivermen and their plights, his plans of militancy toward the companies of captive mines help forge union sentiment into the steamboat workers and struck a chord with Connor.

To the rivermen, unionization meant a recognition of their identities as a skilled working class. They believed that having a third party in their corner could ease the blow of a much bigger challenge that lay ahead. The cry for acknowledgment as skilled and necessary workers was foreshadowing a much larger threat than worker's rights; it was a need to be valued in the sight of overwhelming technological change. The diesel boat would change the landscape of river work and the relationship between the crews and the established hierarchy on the boats.

Transformation

Unionization on the steamboats changed the crew's relationship to each other and to their work. The unions created three new branches of hierarchy on the boats. The National Maritime Union (NMU) represented the deckhands, the Marine Engineer's Beneficial Association (MEBA) represented the engineers, and the Masters, Mates, and Pilots (MM&P) represented the captain, pilot, and mate on the boat. The cooks and chambermaids were represented by the American Federation of Labor (AFL). Once a crew member went from unlicensed personnel such as from a deckhand to a mate, they had to change their union affiliation. At this point, after World War II, unionization on the steamboats resembled their larger ocean going and Great Lakes counterparts.

Unionization was not uniform on the steamboats on the Monongahela River. The NMU came in first after the 1941 strike. This caused tensions with the licensed crew on the boats as Justin Wilson recalled the “fights and bitter hard feelings” toward the unionized deckhands. They “hated the deckhands because...they couldn't control you like they did before.” When the boats were unionized power relationships on the vessels changed. The authoritarian figure embodied in the captain was stripped of most of his power. The unions contracted most of the work that was done on the boat and formally defined the positions and duties of each of the workers. This rigid set of definitions gave the crewmen power in the face of an ever demanding captain. For example, Justin Wilson recounted a story of a captain wanting the steamboat's yawl cleaned during a twenty-six hour lay-up waiting to enter Lock #4. The crew refused the mate's orders to clean the yawl because the boat was not tied up, and the union contract required the boat to be tied.

Prior to the unions, grievances were brought about working conditions on the boat, that grievance followed the chain of command going through the unlicensed personnel to the licensed personnel such as the engineer, to the mate, and then finally to the captain. At this point the captain had several options to deal with the problem through punishments, firings, or even bringing the grievance to the shore boss. This last step was unlikely as it would have reflected poorly on the captain's ability to handle his problems “in house”. Usually the shore bosses dealt with problems that captains had of their own about company policies as Scott Hurst related in his interview.

The unions created a new dynamic on the boats. They became a third party outside of the company and outside of the authority of the captain. They had the power to over-rule the captain's judgment in grievances, and above all, they placed restrictions on how a captain ran his boat. This created tensions between the licensed and unlicensed crew. The relationship to work was fundamentally changed for many of the men. No longer were the men working toward a cohesive unit, instead they were working to satisfy the terms of the contract they served under.

The contract became a point of resistance for the workers when dealing with a captain's over-reach. Crewmen fought what they perceived as unfair practices with the contract as a tool of leverage. They used the new rules that the union brought in for safety to fight against the establishment, to bend the captains to their will. In effect, the hierarchy was over turned, the crew now scrutinized the licensed crew, watching for mistakes that went against the contract or the new rules governing the boat's operations. A guard chain two inches too low, as in the case with Scott Hurst's engineer became a

point of conflict and resistance. Doing another crewmen's job that was outside the bounds of the contract could leave the work unfinished.

While everyone who was interviewed felt that the unions were necessary, for instance, they created the seven days on and seven days off schedule for the rivermen, they also felt it changed the dynamic of the boat's operations. Before the unions, the crews worked as a team, as a cohesive unit on their watches. They helped each other, ate with each other, and formed a unified front against the captain in times that called for grievances. When the union contracts were developed, each worker now had a specified role and a set list of duties. One worker who felt jaded for the smallest infraction of his contract and became idle went against that spirit of working together. The interviewees believed that many workers used the union to escape work, they had somehow used the union as a vehicle of laziness. A good crewman before the union was hard working, loyal, adaptable to the working conditions, got the job done, stuck up for each other, and willing to work above what was asked of you. After-all, your identity as a riverman was a combination of these, plus your loyalty to your boat.

When frivolous grievances were filed, work the boat began to transform the 'familial' ties that earlier crews experienced. The easy going attitudes of some crews began to change, as the contract was used to avoid work or going beyond and helping your fellow crew member. No longer was there a need to help a fellow worker as the contracts laid out each specific job on the boat. Each person knew their job, their place. There was little need for the cohesion that existed before the unions. The captains, pilots, and mates were just another party to be dealt with outside the larger corporations. Union delegates on each boat handled grievances between the crews and often the union had the

final word. Union contracts placed restrictions on the power of the licensed crew, leveling to a large degree the authority of any of the licensed crewmen. All that separated them from the unlicensed crew was job descriptions and pay rates.

Although most workers I interviewed wanted the union, when looking back on their careers, they felt the union changed their work negatively on the river. After unionization, many said the workers became lazy and some felt they had used the contract as a crutch. “Them guys worked themselves right out of a job”, as Scott Hurst put it. Hurst said, “... after the war, it go so that they would hire anybody cause nobody wanted to work on the river. And it went downhill fast.”

Technological Discontinuities

“Well at the time too that the war broke out, and at that time I could see where the steamboats were going to be phased out. I could see that. OK, they [the diesel towboat] were cheaper to operate and it wasn't overnight.”

Greg Hall

The strikes on the river that extended into the post war era were attempts by the riverman not only to position themselves with better wages and fairer working hours, but also an attempt to preserve a way of life and labor. Technological change came slowly to those who toiled on the boats. From 1811 to the end of the 1940s, technologies introduced on the river had changed the structure of work very little. The transition from wood burning boilers to the advanced marine locomotive boilers after the Civil War was one such transition. Stoker boats, which had self-feeding coal furnaces via an Archimedean screw, eliminated the position of one fireman per watch. However, these

boats never gained the necessary adoption by companies partially due to costs and maintenance. An excerpt from International Marine Engineering 1915 said:

Of course there have been improvements consisting of refinements in the construction of hulls, engines, and boilers, and in the use of new labor saving machinery. Tandem compound condensing and non-condensing engines have been used in place of the simple high-pressure engines. Refrigerating plants and steam steering apparatus have been introduced. Sanitary drinking fountains, providing cold water for the crews, filters for the drinking water, electric lights and search lights have been provided. Improved furnaces have been made and several types of both water tube and fire tube boilers have been designed, but nevertheless, the same general lines of design that were in vogue forty years ago still prevail to a great extent, and many of the older boats built thirty-five years ago are doing splendid service today at comparatively low operating cost, using the old style high pressure engine (Burnside 1915).

The relatively static state of technological change in the steamboat was about to change rapidly by the end of the 1940s. The technological turn that the rivermen were about to face was the diesel engine and the diesel towboat. The crew's relationship to their work and to the boats was about to change within a period of a few short years. The last stern wheeled towboat would end her service in the 1957 on the Monongahela River.

The introduction of the diesel engine and the diesel towboat brought with it economic advantages to the companies operating on the river. Less crew, easier operation, less skill needed in the engine room, and less operating costs were some of

these benefits. After World War I, few of these new type boats were in operation, although their adoption was on a slow increase. Large strides in diesel technology would come after World War II and the adoption rates of companies soared as the wooden steamboats were scrapped for easier to maintain steel diesel towboats. This transition occurred at the same time many of the larger steel producers began to buy out and absorb their competitors. Talbot Smith recalled this combination. "Union Barge Line was the first. There was J&L, Wheeling Steel, Crucible, um, Dravo. They were all big outfits. After a while they were all taken by bigger outfits. Then they went out of business. You take a guy like me, you didn't have to have no education. I never had an education. It hurt at the end. All the companies sold out, went out of business. I stayed with Union all the way up until the end. Then when we were done, that was it. CONSOL (Consolidation Coal Company) consolidated (Pittsburgh Consolidated Coal Company)."

Justin Wilson brings the foreshadowing of the diesel boat's effect on the steamboat as he and the old engineer slowly release steam from the *Mongah*. "He [engineer] said, 'Son, you'll never see this boat roll a wheel again. And you'll never see another steamboat again go up and down this river.' That was the truth. And I was so glad that I got that in my heart because I loved them steamboats. And I was like him, you know. I knowed that was an end to an era right there."

Churella (1998) examined the effects of the energy transfer that the locomotive industry went through when switching from coal burning steam engines to the more efficient diesel locomotives. The term he uses for this rapid change in technologies was, technological discontinuity. The technological discontinuity of the switch from coal fired steam towboats to the diesel towboat was no less dramatic. In fact, it predated the switch

in locomotives by a few years (Churella 1998). The rapid change on the river put many classes of workers out of jobs. Repair parties used to fix the wooden paddlewheels, coaling stations and their workers, boat yards skilled in wooden boats, and over half of a labor force working were suddenly obsolete.

The unionization of the steamboats placed into motion a new model for labor that fit the operation of the diesel boats better than on the stern wheelers. The new diesels required a crew that was less skilled than those on the steamboats. Each crewman performing their tasks to the letter of the contract was slowly deskilled as apprenticeships were no longer necessary to learn the work on the river. The engineering staff was phased out as the diesel boats lacked the need for firemen, striker-engineers, and boiler deckmen. The early diesel boats had chief engineers for a short time until they were replaced by diesel mechanics.

Captains and pilots, with their authority purged by union regulations, became “operators” in a sense monitoring the gauges and radar and performing all the engine management from the pilothouse. Cooks on the early diesel boats were as prized as they were on the steamboats until modern appliances were installed such as microwaves, dishwashers, washing machines, and clothes dryers. Chambermaids were no longer needed as the crews became self-sufficient to take care of their own laundry and cooking. Deckhands were the only class of workers who were still needed and whose roles were largely unchanged.

Workers on the diesel towboats were reduced to contract oriented workers that was introduced with unionization. The technologies that the new diesel boats provided eliminated much of the skilled positions on the boats, and instead replaced them with

repetitive task completion. This was a form of scientific management or Taylorism detailed by Braverman (1998), which reduced the workers and their roles on the boats to simple laborers. The licensed crew, the mate and the pilot became managers. A new form of identity was transforming the long established identity of the steamboat worker. This new relationship to work undermined the sense of “home” and replaced that loyalty to the boat and fellow workers with a set of contractual agreements that each crewmember was had to perform. The pride of working for a boat or a particular crew gave way to working for a faceless corporation.

Some of the interviewees understood the advantages that the diesel boat had over the steamboat. They were all steel construction, their engines could be turned on and off with a key, and there was no wait time for boilers to build up steam. The early diesel boats as Scott Hurst said, were under powered, were less maneuverable, and under performed in high water. However, the advantages of the diesels outweighed the early problems as the companies saw it. You needed less crew to operate the boats, the companies no longer needed repair parties to fix the boats, and the diesels just needed a mechanic. Steel was cheap after the war and lasted longer than wood.

The transformation from steam to diesel was also a transformation in worker identity. The new towboats deskilled the workforce and created a new relationship between the hierarchies on the boats. Corporations were in full control of the crews on the diesels. Disputes on the boats were handled through union negotiators bypassing the captains all together. Regulations and training programs replace apprenticeships, while the rivermen took on a new identity of employee.

Conclusion

This dissertation traced the long evolution of worker identity of those who worked on the steamboats for 139 years starting with the first steamboat on western waters and ending with the dieselization of the river in the 1950s. This research is only the beginning. I have provided a cultural background that other points of data can be placed within as they are discovered. This study lays a fundamental foundation for river transportation studies conducted in the Monongahela Valley, as I know of no other complete history written for river transportation in the 19th century.

Worker identity throughout the steamboat industry from 1811-1950 faced periods of change as new technologies and new economic models reshaped the landscape of work on the Monongahela River. The crews, along with their captains, faced internal and external pressures that help mold what was called a “riverman” or “riverwoman” into a working class. At each stage of development, the worker was an active player with agency to conform to the situations presented, however, it was when authority was beyond their control that they acted out and fought back against what they viewed as oppressive working conditions.

Steamboat workers lived in two worlds, one dominated by the boat, the other their home on the land. Often these two worlds were in conflict, only to be balanced when the worker retired from the river. You “left your problems at the kitchen door” not because they wanted to avoid a situation but because “you had to work with captains”. Your job took precedence over your home life. Life on the boats was hard enough, six hour shifts for twenty-four hours working for a week at a time. Each crewman had a specific job or

place on the boat. It was a dangerous job where a mistake could threaten the lives of the whole boat or where an accident could take a limb or life.

The towboat was a self-contained community ruled by a long held hierarchy of command that went from captain to mate, and from pilots to engineers, and then down to engine and deck crews. The authority of the captain was, as some described, the word of god on the boat. His power could force men to quit, or make life miserable for those he didn't like. The ambiguity of the mates on the boats put them into a peculiar position of command. Some were legendary for their abusiveness of the crews other appeared as a halfway point between the crews and their captains. The engineers on the boat, from the descriptions given by some of the interviewees, make him out to be the wise mystic, a holder of arcane knowledge, and pragmatic individual. The experience of the crews with each level of the hierarchy helped form their identity, and some had better experiences than others.

During the Late Steamboat Era, tensions were high in the coal fields of western Pennsylvania and in other coal producing regions. Strikes were common after World War One, and the passing of the Wagner Act helped open the door for organized labor. The towboat crews used this as an opportunity to gain better wages, shorter working hours, and fairer treatment on the boats. They wanted to take the power from the captains. There was another reason for this however. On the horizon was a new technology, the diesel engine. I believe that the workers understood the implications for this technology and sought to be identified as skilled, indispensable, workers.

Once unionization occurred, power was transferred from the captains to a contract. Workers would not perform duties outside of their stated contracts. Worker

identity was moving toward another phase, the unskilled employee. This new organization and new relationship to work on the boats began to break the backs of the sense of community on the boats. Workers were no longer team players, but simply fulfilling the needs of the contract causing tension among the older crew members. The captain had no power to resist as grievances could stop work all together on the boats. The union became a third party between the relationship between captain and crew. As some pointed out in their interview, this spelled the end for the steamboat and a new age was born on the river.

The replacement of the steam powered towboat by diesel powered boats transformed worker identity that would be unrecognizable to the generation before of river workers. The technological discontinuity that the diesel boat caused changed the landscape of work on the river and on the boats. Organizationally, the diesel towboat required six personnel to operate, usually two to four deckhands, a mate, and an operator. While the schedule was the same as the steamboats, the crews were contractual deskilled. No longer was there a need for an engineer on board, diesel mechanics replaced them. Captains became operators and were still required to be licensed, but no longer held the same authority. Strikers, firemen, boiler deckmen, cooks, maids, they were gone.

The old time steamboat workers are fading into the past. There is no real data on how many are still alive. Their tribute to transportation history cannot be over stated, especially when so much research has been devoted to the railroad and its past. The steamboat represented the fruits of the industrial revolution, where humans were taken out of the equation of transportation, and instead replaced by a steam engine and a paddle-wheel. The steamboat was uniquely an American invention, it was invented in the

US and then diffused later to other countries such as Germany and Britain. The workers who lived on the boats and sacrificed their home lives, should not be forgotten.

When thinking about new areas that would enhance this work, more documentation for the Early Steamboat Era is a possible direction. The lack of local newspapers that have survived from this early time, especially ones that were printed in Brownsville, if found, would patch a variety of holes especially when it came to the workers on the boats. The same is true of maps. Mapping of the early town is lacking, but if maps were discovered, it would open a whole new era of landscape studies in the town. The third type of document from this time period that would help in further understanding these early steamboat crews would be the discovery of Robert Roger's diary. Robert Rogers, mentioned in the text, was an early steamboatman who was on the second steamboat voyage to New Orleans for the time. His journal is alluded to by local historians in the 1880s and some have quoted it, but where it is located now is unknown.

The second type of data that would help complete the picture of worker identity is more archaeological excavations. Locating steamboat crew's family homes or other captains houses would provide more for a proper class-consumerism based archaeological comparisons. The lack of data on the steamboat industry has a variety of reasons, including a lack of research focus by archaeologists, a lack of documentation, and the lack of larger archaeological studies focused on rivertowns and river transportation. An inter-town study that branches a few rivertowns along the Monongahela River may offer a unique research design; class comparisons between river workers in different towns may lead to insight into wealth distributions.

The last area, and perhaps the most important, is to broaden the oral history studies. The men and women who worked on the boats are reaching an age where soon they will be gone. Half of the members of this study have passed away in the three short years of conducting interviews. While researching for this dissertation, it was discovered that there other repositories for oral histories of river workers, mainly taken from the mid-20th century at some Midwestern universities. It is possible that other more localized repositories in small town museums exist. Creating a larger study based on the collection of these oral histories and their shared experience working on the river may give a renewed voice to a chapter in our transportation history that has long faded away.

Identity formation of the steamboat workers can be identified through documentary research, archaeological excavation, and oral histories. Their identity was tied to the place of their work, the steamboat, as both a home and encapsulated community. They developed a deep sense of family that often took precedence over their land based families. Their identity was re-enforced by long established hierarchies of command on the boats. Unionization solidified this identity and sparked a sense of class-consciousness, only to finally being torn apart by dieselization.

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Appendix I. Sample List of Questions for Interviewees

Community Life

1. What was the neighborhood you grew up in like?
2. Did you own your own home or rent?
3. Was the company you worked for influential in the community?
4. Where did others like you spend you free time? Did you belong to any organizations? Fraternities or societies?
5. Did others who worked on the river live in the same neighborhood?
6. Did you share the same religious beliefs as those you worked with? Worship at the same church?

Home Life

1. How was your family organized? Extended family? Borders?
2. What did your spouse do? Any affiliation with the work that you did? Was he/she involved in the community?
3. While at work, how was the family unit maintained? Did your spouse take on any supplemental work to support the family?
4. Did your community change over time? Were there any divides within the community ethnic, racial, or economic?
5. What about you parents? Where did they come from? What sort of ethnic background did they have? Did you stay with them or in the same neighborhood after you became an adult, or did you move on?

Work Life

1. What dates did you work on the river?
2. What was the initial draw to work on the river?
3. Did you have relatives that also worked on the river?
4. What position did you start in?
5. What were your duties?
6. What was the company's name for whom you worked?
7. How was your work area organized?
8. Can you remember how many people you worked with and their roles?
9. What was the ethnic mix of workers?
10. Describe how your work day was constructed? How long were your shifts?
11. What were some of the duties of your fellow workers?
12. What were some of the dangers and stresses of working your job?
13. What was your relationship with your captains like? W
14. What type of safety rules or regulations did the company have? Were they followed?
15. Describe your work environment.
16. Could you describe the best parts of your jobs, what you enjoyed, or perhaps didn't enjoy or like?
17. Did you have to move from place to place to follow a job?

Unionization

1. When did the unions come in?
2. Which unions were they?
3. How did you feel about the unions?
4. How did the unions change your working conditions?
5. How did the captains respond to the unions? What effect did the unions have on them?
6. Were there any problems with the unions?
7. Was everybody for unionization?
8. What were some of the drawbacks to the union?
9. What benefits did you receive being in the union?

Diesel Towboats

1. Did you work on a diesel towboat?
2. How were the diesel towboats different from the steamboats?
3. What positions did the diesel towboats have?
4. What were some positive aspects of the new diesels?
5. How did you feel about the diesel towboat?
6. How did work change on the diesel towboats?

Appendix II. Interviewees Profile

Talbot Smith was born in 1924 and lived in Newell, Pennsylvania. Worked for various companies including Crucible Steel. Worked his way from a coal passer to captain on the steamboats.

Justin Wilson grew up at Lock #4, a small community in West Elizabeth, Pennsylvania. Wilson was in his late 80s when interviewed. He served as a striker-engineer and deckhand for various companies on the Monongahela River.

Nolan Connor grew in Brownsville. Nolan served as a fireman and deckhand for Carnegie- Illinois Steel, Chevron Coal and later on the diesel towboats for Dravo Corporation. Nolan was 94 at the time of the interview.

Anne Novak grew up in Chew Town, a small community outside of West Brownsville, Pennsylvania. She worked for Jones & Laughlin as a maid on the steamboats for about three years and once worked on the diesel towboat the *Trojan*. Anne was in her mid-80s at the time of the interview.

Greg Hall lived in a town called Wilson, which served as the Carnegie-Illinois Steel Marine Ways which had a landing and repair area for steamboats. He started working on the steamboats in 1939. Served as a chief engineer on a variety of steamboats.

Sofia Kowalski was born in 1915 and lived in West Newton, Pennsylvania. She served as a cook and maid for Jones & Laughlin and later LTV Steel. Two of the many boats Sofia worked on were the *Shannopin* and the *Vulcan*.

Scott Hurst was born in 1927. He lived in Charleroi, Pennsylvania at Lock #4. He served as a captain for the Army Corps of Engineers Pittsburgh District. He piloted the derrick boat *Monallo II*.

Twila Kelly was born in 1922 and lived in Brownsville. She worked as a maid and cook on various diesel towboats for Union Barge including the *Pennsylvania* and the *Southerner*.

Appendix III. Copyright Page.

Figure 1: Composite map created from Ellis (1883) and author.

Figure 2: Steamboat Enterprise. Fair use widely distributed. Unknown author.

Figures 3, 4, 5, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22, and 23: Created by author.

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Figures 6, 24 through 31 permission email from California University of Pennsylvania:

Mr. Marc Henshaw
Department of Social Sciences
Michigan Technological University
Houghton, MI USA 49931

Dear Marc,

At your request, I am sending this email to confirm that you have permission to use digital copies of the steamboat images owned by the Center for Historic and Prehistoric Sites Archaeology, California University of Pennsylvania. The images in question have been the property of the Center since the 1970s and I cannot find any record about their origin or source. As part of our agreement, please acknowledge California University if any of the images are included in your dissertation.

Best Regards,

John P. Nass, Jr. Ph.D
Anthropology Program Coordinator
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Figure 32:

The Helen Z. of Pittsburgh, Pa amid ice flows along the south shore of the Allegheny River at the Point. Shows the Manchester Bridge in the background.

Location:

Downtown

Address:

Allegheny River

Pittsburgh City Photographer Collection

Source

Pittsburgh City Photographer Collection, 1901-2002, AIS.1971.05, Archives Service Center, University of Pittsburgh: <http://images.library.pitt.edu/cgi-bin/i/image/image-idx?view=entry;cc=hpicasc;entryid=x-000443.PIC>

Subjects

Helen Z. (Towboat).; Towboats--Pennsylvania--Pittsburgh.; Allegheny River (N.Y. And Pa.); Rivers--Pennsylvania--Pittsburgh.; Manchester Bridge (Pittsburgh, Pa.); Bridges--Pennsylvania--Pittsburgh.; Pittsburgh (Pa.).

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Appendix IV. Digital Artifact Catalog

The artifact catalogs for the Captain Gormley and Captain Michael Cox house excavations are located on a separate DVD located in the sleeve at the back of this dissertation. The catalogs are recorded in Microsoft Excel 2010 spreadsheets.