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Metamorphosis of the Providence Waterfront: A Geographic Perspective

Gerald H. Krausse

Rivers have played an important role in the urbanization of Providence, both in the past and in the present. As its principal link to the ocean, they were the economic lifeline for much of the city's early development. In the eighteenth century the Providence River served as a transshipment point from which local products were exported and foreign goods distributed into the regional hinterland. During the nineteenth century the shores of the city's waterways were transformed by intense industrial development, much of it in conjunction with the coming of the railroad. Having lost its economic usefulness in the early twentieth century, the river became an obstacle to a city whose needs had become more dependent upon the automobile, highways, and suburban industry. Since the historic preservation movement of the 1950s, however, the waterfront has once again occupied center stage, now as a key element in the revitalization efforts of the central city.

The evolution of the Providence waterfront may be examined within the context of several geographic concepts and models. One of these is the concept of site and situation, which focuses on scale and makes a distinction between man's impact on local space and his impact on the region that lies behind it. This approach also takes into account the interdependency between the two areas, since a site responds to changes in the surrounding region, and vice versa. Another idea, sequent occupance, attempts to explain the changing patterns of living in a

settlement over time. To cultural geographers, this concept has given human behavior a new meaning, for temporal variations in economic activity or type of transportation can play a profound role in the nature of human occupation of an area. In still another approach, models of urban structure are used to show the way in which land is utilized as a city grows and develops. In these models the spatio-temporal dimension can form the basis for differentiating use activities on a waterfront and in the adjacent areas. All of these geographic approaches may be applied to put into proper perspective the events and activities that have shaped the changing landscape of an urban shoreline.

The location of a settlement is chiefly determined by the attributes of its site and situation. These attributes also affect the settlement's growth and development.¹ In an analysis of the geographic characteristics of early Providence, a distinction must be made between site and situation: the site was the river environment itself, where the settlement began; the situation encompassed the activities and resource base of the surrounding region, which influenced the economic vitality of the waterfront in later years.

The site. The founders of Providence chose the site largely because of its favorable physical attributes. The location selected had a natural spring near the mouth of a river, it was protected from the open sea, and it was well situated for the prevailing modes of

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1. Dean S. Rugg, *Spatial Foundation of Urbanism* (Dubuque, Iowa: William C. Brown, 1972), 83-88.

transportation. The local topography, dominated by Mount Hope, Federal Hill, and College Hill, formed a central basin where the downtown area later developed. That basin was traversed by the Moshassuck and Woonasquatucket rivers, which terminated at the Cove and provided the headwaters for the Providence River. As long as the settlement remained small, no significant changes in the natural configuration of the landscape were required. Farmers crossed the rivers by canoe, or at wading places, and Indian trails provided access to the immediate hinterland. The site where the downtown Arcade now stands was a small island in the Providence River. The feature most critical to the development of the colony and access to the river was the two-hundred-foot ridge known by the Indians as the Moshassuck; the colonists renamed it the Neck, but today it is more commonly known as College Hill. The top of this hill provided a panoramic view over the Cove and miles down the bay as far as Sassafras Point.

The original lay of the land, however, has since been shaped and reshaped, though dredging and filling, into a product of human engineering (see figure 1). The Providence River originally contained many shoals, which constituted a hazard to navigation as larger vessels entered the waterway. As river traffic increased, sections of the navigable channel were dredged to nine feet in 1852, to twenty-five feet in 1913, to thirty-five feet in 1937, and to forty feet in 1965. In the past most of the dredge spoil was used as fill; today, however, dredging is limited by the fact that the material is very toxic and disposal sites are difficult to find. Along the river deepwater piers, bridges, railroad lines, and warehouses have replaced the open shoreline so familiar to early settlers.

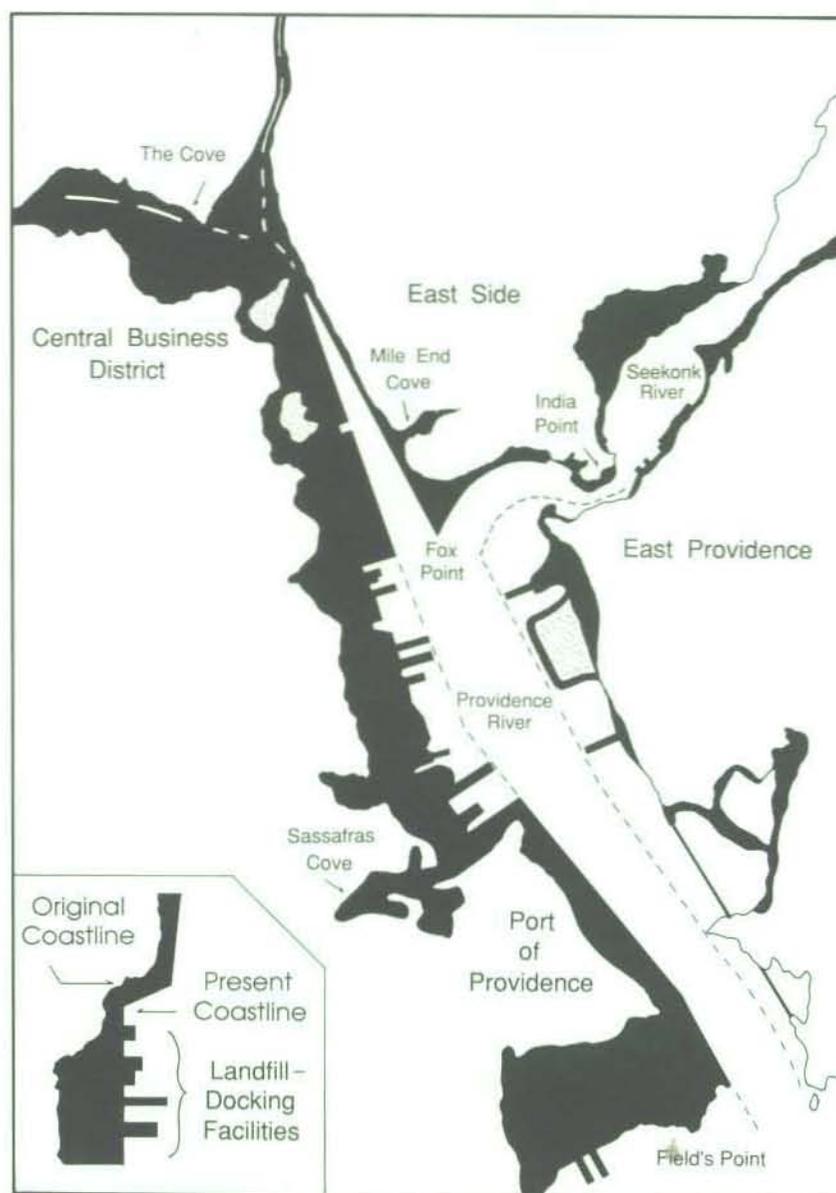


Figure 1. Changing shoreline, Providence River and port areas, 1635-1985

The situation. The region served by a port has been given various names, such as *hinterland*, *zone of influence*, and *service area*. The relationship between a port city and its hinterland is one of economic interdependence; food and raw materials come into the city, while goods and services are provided to the surrounding region. In Providence, changes in economic activities have determined the pattern of population growth, with population fluctuating in response to the health of the local economy (see figure 2). During the mercantile period of the 1700s the surplus of commodities produced by the hinterland moved toward the waterfront, from where

imported goods were dispersed to settlements in the hinterland. After the Revolution this pattern began to change: instead of sending English goods to the hinterland and collecting products in return, many Providence merchants started business enterprises

of New England sheep raising, producing both wool and meat.² Flax grew well under the environmental conditions of southern New England, and it became the most common industrial crop of the colonial agricultural landscape.

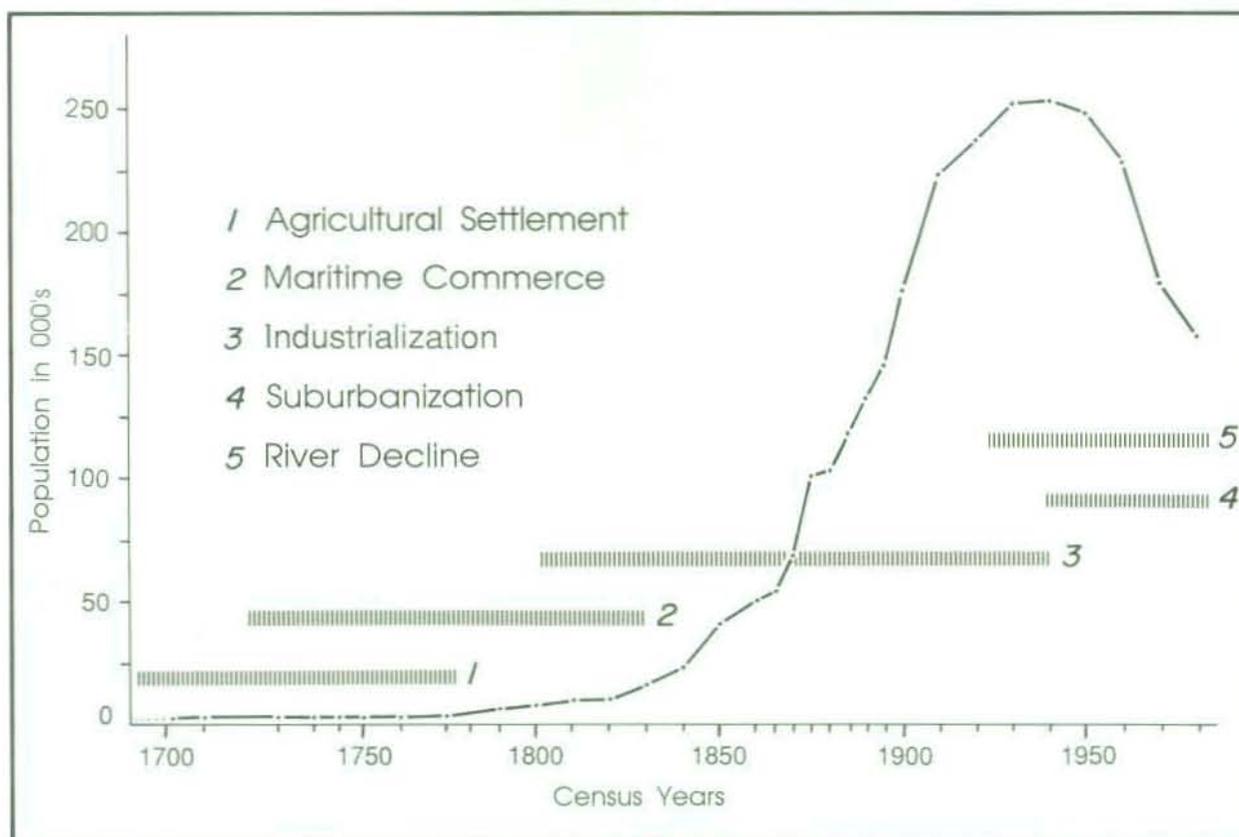


Figure 2. Population and economic trends

that did not depend on such trade. Eventually these independent activities took on a pattern that permitted a very complex exchange of cargo with both sides of the Atlantic.

Several decades after permanent settlement, the Providence hinterland became a region of agricultural surplus which not only sustained the increasing population but also provided products for overseas trade. Grains were the most marketable commodities; wheat, in particular, brought a high price, so it was able to absorb the cost of long-distance transportation, and it was even accepted as payment of taxes. Rhode Island was also the center

Locally produced flax and wool provided a foundation for the state's textile industry. It is ironic, however, that cotton, which was to play such a prominent role in the industrialization of Providence, could not be grown locally.³ With the arrival of Samuel Slater, river valleys in Rhode Island emerged as major centers for cotton textile manufacturing. The cotton, imported from the South and the British West Indies, was made into coarse cloth for the plantation trade. In 1840 there were ninety-four cotton mills and fifty other enterprises on the Blackstone River using waterpower as their major energy source.⁴ The rivers of Providence were not

2. Douglas R. McManis, *Colonial New England: A Historical Geography* (New York: Oxford University Press, 1975), 97-98.

3. Robert G. Leblanc, *Location of Manufacturing in New England in the Nineteenth Century* (Hanover, N.H.: Dartmouth College

Center for the Study of Social Change, 1969), 42.

4. Victor S. Clark, *History of Manufacturing in the United States* (Washington, D.C.: Carnegie Institute, 1916-29), 1:404.

good sources of waterpower, but they did provide needed transport facilities and a convenient way to dispose of wastes; and thus the development of steam-powered machinery brought about the growth of cotton mills and other industrial plants along the city's waterfront as well.

Access to the waterfront from the Providence hinterland rested upon overland transportation routes. The early turnpikes and later the railroads facilitated the movement of the accumulated surplus and raw materials from the villages to the local towns and then to the regional capitals where these goods were sold at wholesale. From there commodities were shipped abroad to settle foreign accounts and to produce new capital. Not only was the Providence waterfront central to this process, but it also functioned as a break-in-bulk point, and because of its favorable site it handled almost twice the tonnage of Newport by 1800. It was at that time that the Providence riverfront developed into Rhode Island's major port.⁵

The concept of sequent occupation has been used by geographers since the 1920s to analyze the human occupation of an area.⁶ This approach can not only provide insights into the different ways former inhabitants have used a shoreline; it can also explain the present by showing the impact of the past. Derwent Whittlesey suggests that "stages can be recognized during which human occupation of a site remains relatively constant in its fundamental aspects, followed by the onset of rapid and profound changes in the way of life." For the case at hand, five stages of occupation along the Providence River may be defined on the basis of economic activities, settlement patterns, land uses, and modes of transportation (see figure 3).

The Indian period. Prior to 1600 the Providence and Seekonk drainage basins were an unbroken wilderness covered with oak, hickory, and pine forests, marshes, and gravel beaches. The hills and valleys were occupied by various Indian tribes (the

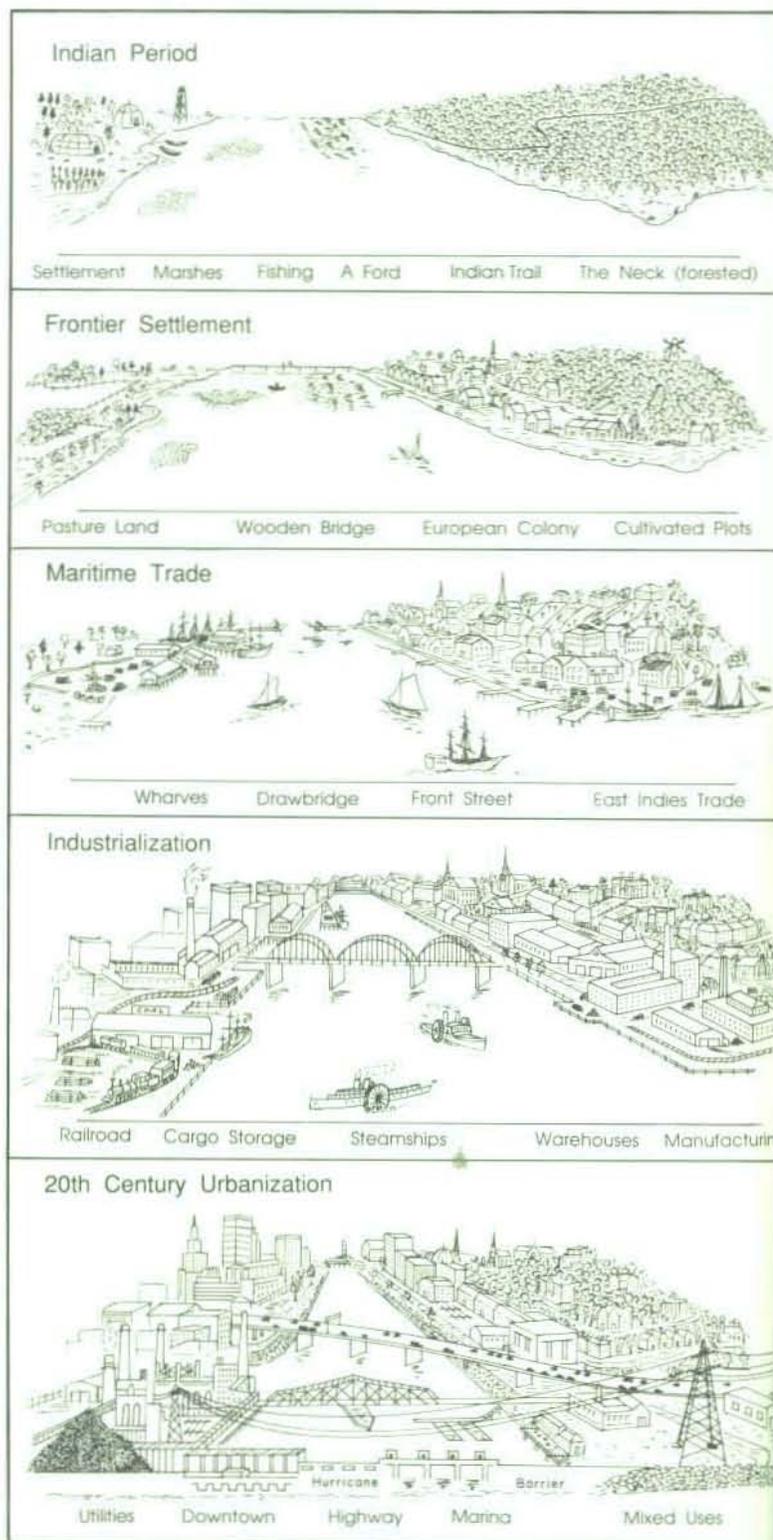


Figure 3. Stages of occupation on the Providence River

5. David Schweid, "A Barge Feeder Service for Containerized Cargo in Providence: Part of a Regional System." (M.A. thesis, University of Rhode Island, 1980), 13.

Narragansetts, the Wampanoags, and the Nipmucks), as was evident in the network of trails and cleared forest in the area. The Indians drew their livelihood from the rich estuarine environment of the upper bay, which provided them with materials for food, clothing, and shelter. According to Giovanni Verrazzano, who in 1524 was the first European to sail into Narragansett Bay, the natives lived in small coastal villages surrounded by expanses of cultivated fields; their dwellings were wigwams (domed dwellings) made of sapling frames covered with reed mats.⁷ Recent archaeological evidence from the Cove area indicates that the Indians there did relatively little farming and relied more on fish, shellfish, and marsh plants for their daily diet. Circular trapping devices, called weirs, were commonly set on mudflats where the catch could be easily harvested at low tide. Sometimes the Indians engaged in deep-sea fishing expeditions, using canoes, built out of tree trunks, with a capacity of up to fifteen men.

Agricultural activities were pursued chiefly by women, except for the growing of tobacco, which was carried on exclusively by men. The crude methods of cultivation included the application of fertilizer derived from dried menhaden and seaweed. Tribal groups routinely gathered together to perform the labor-intensive activities of planting, harvesting, fishing, and building shelters. The Indians' notion of real estate was communal ownership; individuals and families were entitled to the use of land, but they did not exclusively own it. Occupying the land this way encouraged a conservative use of resources and a significant respect for the environment. In fact, the native practices in using the Great Salt River (later renamed the Providence River) created far less impact on the ecosystem than what occurred at any subsequent stage of human occupation.

Frontier settlement. Historians stress the political and social functions of a colonial settlement; geographers conceive of it spatially, as a collection of

buildings occupying a frontier territory. Providence had its beginnings when Roger Williams acquired land from the Narragansett Indians in 1636 and formed a committee of proprietors to determine the ownership and utilization of that land. The predominant economic activity practiced by the first settlers was farming, and the territory remained a "plantation" until it was officially granted town status in 1649. The new plantation contained land suitable for pasture, cultivation, and homesteading. Few records exist regarding the earliest use of the land, but it appears that the settlers built their shelters parallel to the shore of the Great Salt River and planted corn in fields abandoned by the Indians. Many home lots and roads were laid out along Indian pathways that conformed to the topography of the Neck. By 1650 some fifty-two houses made up the compact part of the settlement. Most of these were lined up along Towne Street (later North and South Main streets) on the waterfront. Six-acre house lots for gardens and burial grounds extended to an elevation of two hundred feet, terminating on top of the Neck at a so-called "highway," now Hope Street.⁸ These adaptations were some of the earliest examples of cultural change associated with the seaboard settlement.

Unlike other New England towns, colonial Providence had no village green nor any preconceived land-use plan. What might be considered the earliest civic center began to emerge near the head of navigation, at the mouth of the Moshassuck River. Here a grist mill, a tannery, several taverns, and the office of the town constable formed the nucleus where town meetings, religious services, and informal gatherings were held.⁹

As the town attracted more settlers from Massachusetts, newcomers began to move across the Great Salt River to the Weybosset side, where "common meadows" and good land were available for raising livestock and growing crops. Initially farmers crossed the river by canoe and forded their cattle at the place where the Weybosset Spit created a narrow

6. Derwent Whittlesey, "Sequent Occupance," *Annals of the Association of American Geographers* 19 (1929), 162.

7. McManis, *Colonial New England*, 5.

8. John Hutchins Cady, *The Civic and Architectural Development of Providence* (Providence: The Book Shop, 1957), 7.

9. *Ibid.*

and shallow passage in the river.¹⁰ This ford and its rapids tended to put man and beast at risk and made the crossing to a specific landing point difficult, particularly during stormy weather. To alleviate these conditions, the town council decided to designate the central portion of the waterfront as common land and initiated steps for the construction of a permanent bridge.

The first wooden bridge across the river was built in 1660. The bridge connected the hay market on Towne Street with the Pequot Trail (later Weybosset Street), which led to the open country of the Narragansett and Pequot Indians.¹¹ The new bridge provided more reliable access to the agricultural hinterland for the transportation of produce to the marketplace.

Clearly the developments of the first few decades indicate that Providence was almost exclusively a community of planters. In a sense that was only natural, since food and shelter were the most important concerns for survival in this new habitat. During this time the riverfront emerged as the focus for most economic activities, and the town layout followed the general topography. There was little change along the shoreline; the only uses of the water's edge were at outcrops and projecting rocks, which provided landings for boats and canoes.

Maritime trade. Narragansett Bay and the Providence River had been used since the early years of the colony for occasional transportation of supplies, but their potential for shipping and sea trade was not at first realized. The years after King Philip's War, however, saw the beginning of intense maritime activities in the upper bay. During the 1675-76 conflict much of Providence was destroyed by the Indians, and as residents began the task of rebuilding, many opted for commercial ventures rather than return to farming.

The construction of wharves on the Providence River began in 1680, when Pardon Tillinghast built a wharf near present-day Transit Street. With the growth of commerce, many businessmen who owned property on the riverfront established

storage and docking facilities along Towne Street as far north as Market Square.¹² This public square, originally known as Town Parade, was created to provide a place for farmers and merchants to congregate and sell their products. To prepare the site for these activities and subsequent new buildings, the town had it graded, filled in, and supported by a retaining wall. In time many commercial establishments, such as the Market House, Roger Williams Bank, and the Coffee House, emphasized the square's function as the center of town. Near the marketplace a town dock was built which was used primarily by lobster and fish vendors who sold their products directly from the vessels. On the Weybosset side similar developments expanded into the riverbed with wharfage that was dominated by coastal shipping.

As the development of the riverfront began, the town decided to reserve certain of its rights to the water. In 1681 the General Assembly voted to set aside public lands "three poles wide" (about fifty feet) from the streets to the river's edge for the purpose of maintaining some control over building activities.¹³ This may well have been Providence's first attempt to preserve public access to a free resource, as well as to set aside land for the permanent use and benefit of all the people.

In the late 1700s the shorelands around Tockwotton Hill were developed to serve the China and East Indies (Southeast Asia) trade, and the site became known as India Point.¹⁴ Ships laden with cannons, anchors, bar iron, ginseng, and spirits ventured to Asia and returned with tea, silk, porcelain, and spices. The expansion of Providence's foreign trade required new port facilities to accommodate larger vessels and increased traffic. From Towne Street an extension called Shore Road (now part of India Street) was laid out across Mile End Cove and around Fox Point. A number of trade-related industries occupied this area, including distilleries, ropewalks, ships' chandleries, an iron furnace, a glass factory, and spermaceti candle works.

10. Welcome Arnold Greene, *The Providence Plantations for Two Hundred and Fifty Years* (Providence: J. A. & R. A. Reid, 1886), 49.

11. Cady, *Civic and Architectural Development*, 11.

12. Greene, *Providence Plantations*, 49.

13. Cady, *Civic and Architectural Development*, 15.

14. Greene, *Providence Plantations*, 69.

At the end of the Revolutionary War, Providence emerged as one of the major seaports of the new nation. The Providence River in the late 1700s was described as "a place of more navigation than any of its size in the Union, and there is a greater number of vessels belonging to this port than to New York."¹⁵ In June 1791 the port was visited by some 130 vessels, including 56 sloops, 35 brigantines, 25 schooners, and 14 ships, together carrying a total of 12,103 tons of cargo.¹⁶ These vessels represented a far-flung trade that linked Providence with ports in Latin America, Europe, Africa, and the Orient.

Like that of other port cities in New England, Providence's maritime trade was severely affected by the War of 1812. A blockade of European ports was followed by an embargo act, passed by Congress, that forbade the departure of any American vessel to foreign destinations. In 1814 a British fleet appeared in the upper bay and captured several Providence packets on their way to New York. The town immediately prepared for defense by erecting breastworks between Sassafras and Field's points and a battery of eighteen pounders at Fox Point. Fortunately these defenses, as well as Fort Independence, built at Sassafras Point in 1775, remained untested, and peace was declared in February 1815.¹⁷

In September of that year the Providence waterfront suffered the impact of a devastating hurricane, which destroyed the Weybosset Bridge and wrought havoc among the ships on the river. A 520-ton trading vessel was torn loose from her moorings and hurled onto the headlands of the Cove; other vessels followed, until the shores of the Moshassuck were filled with the wrecks of fifteen sloops, nine brigs, and seven schooners.¹⁸ When it was over, virtually all the vessels in the harbor had been driven from their moorings, and many warehouses and their contents were severely damaged or washed away.

The War of 1812 and the Great Gale of 1815 both inflicted far-reaching hardships on Providence merchants and the community. Although foreign trade resumed after these catastrophes, it never

quite regained its former vitality. Local businessmen began selling their vessels and investing their capital in textile mills; and with a decline in ocean trade, the industrial era was under way.

Industrialization. The closing years of the eighteenth century were marked by a growing emphasis on industrial activities, and it was industry that characterized the next period of occupation on the Providence River and its tributaries. Some of the earliest efforts in manufacturing were in brick-making (using the clay from Weybosset Hill) and brass founding. However, the introduction of cotton spinning by Samuel Slater in 1790 and jewelry making by Nehemiah Dodge in 1796 set the stage for what would become the two leading industries in the Providence area.¹⁹ By the turn of the century some thirty cotton mills had been put into operation along the Moshassuck, Woonasquatucket, and Pawtuxet rivers. The costume jewelry industry grew from only four shops in 1805 to ninety in 1856, when it employed several hundred artisans and craftsmen. During the Civil War the base-metal industries expanded, producing cannons, rifles, steam engines, and machinery.

In response to the demand for industrial labor, the city's population grew rapidly, especially among immigrants. There was an Irish settlement in Fox Point near the harbor, a black population along the north shore of the Cove, and a German population in South Providence adjacent to the slaughterhouses and bleacheries. All these groups lived in ill-constructed, overcrowded tenements. As industrial activities and land values increased, the complexion of the city changed dramatically, especially along the river, where factories, blue-collar neighborhoods, and railroads replaced the waterfront's traditional maritime uses.

As the nineteenth century progressed, urban development intensified on the Weybosset bank of the river, the commercial importance of North and South Main streets (the old Towne Street) declined, and College Hill became the cultural and educational center of the city. New land on the Weybosset

15. *Ibid.*, 68.

16. *Ibid.*

17. Greene, *Providence Plantations*, 72.

18. *Ibid.*

19. Cady, *Civic and Architectural Development*, 61.

side was being reclaimed, a new civic center emerged around Exchange Place, and a massive railroad terminal was built there. The shift of businesses to the west side of the river also drew banks and insurance companies to that area and consolidated the formation of the central business district (CBD). The destruction of the Weybosset Bridge in the Great Gale of 1815 and the inadequate service provided by the river ferries prompted the city to deck the river with several new bridges. By 1850 the river was spanned by the Park Bridge (1848), the Exchange Bridge (1848), the Washington Bridge (1828), and the new Weybosset Bridge (1843).²⁰ The completion of the Crawford Street Bridge in 1875 established a new head of navigation still further south of the Cove.

As a result of the extensive decking of the river, many structures formerly on the riverfront were converted to non-water-dependent uses. The introduction of trolleys and horse-drawn vehicles on the site where ships once anchored demonstrated the triumph of land transportation over water transportation. While fish stores and oyster dealers continued to sell their products into the twentieth century, the boats delivering fish were replaced by trucks, and the waterfront lost another of its former uses.

As waterfront uses of the Cove and the upper river were abandoned, industrial development of the South Providence shoreline became more important. Factories, lumberyards, coal elevators, and steamship terminals dominated the new harbor further south on the river. Schooners and barges carried such raw materials as cement, grain, and lumber, but the city's most vital import was coal, which was needed to fuel the steam engines powering the factories after 1827. The mainstay of shipping at this time was the coastal packet trade, in which sloops of fifty to one hundred tons carried freight and passengers between Providence, New York, Boston, and Baltimore. In the late 1800s these sailing packets were gradually replaced by steamboats, and the Fox Point and India Point waterfront became a center of steamship transportation. In order to

provide adequate draft for the increased size of the vessels using the river, the U.S. Army Corps of Engineers surveyed, and subsequently dredged, the channel off Fox Point for the first time. The shoreland in this area was expanded by cutting and filling so that facilities for bulk cargo storage, a railroad causeway, and larger berths for the coal packets could be built. With Providence experiencing a new wave of immigration from Europe by the turn of the twentieth century, a state pier was constructed in 1913 to accommodate the large ocean liners on which many of the immigrants were arriving.

The spread of industrialization on the Providence waterfront could not have occurred without the coming of the railroad. Initially the railroads made use of the waterfront only for the purpose of providing passenger connections to the steamboats. The Boston and Providence Line, which became the state's first railroad in 1835, had its southern terminus at India Point. With the inauguration of service on the Stonington Line in 1837, passengers could take a ferry from India Point to the west side of the river (near the present Thurbers Avenue curve on Route 95) and board a train to Stonington, Connecticut, from where they could continue on by steamer to New York City. India Point remained an important point of connection until a central railroad depot was constructed at the Cove in 1848.

The Providence and Worcester Railroad Company, established to replace the Blackstone Canal, had suggested locating its terminal at the Cove a few years earlier. The proximity of the Cove to the growing CBD, the silting of the basin, and the abandonment of the Cove's maritime uses made this area a logical choice for the railroad. Several companies recognized the benefit of a common facility and rerouted their lines to the Cove. Much of the Cove was filled in for tracks and a terminal, and an elliptical landscaped pond, circled by a promenade, was created by the railroad companies. This urban park became a popular recreational spot, and the adjacent Union Railroad Depot an attraction to sightseers. The Cove's man-made promenade

20. *Ibid.*, 145.

21. Stephen Olsen et al., *An Interpretive Atlas of Narragansett Bay* (Narragansett: University of Rhode Island Coastal Resources Center, 1984), 55.

dramatized the abandonment of maritime trade and emphasized the symmetry of the new urban design then fashionable.

Marine recreation played an integral part of the land-use dynamics between 1870 and 1920, when the city's population increased from fifty thousand to nearly a quarter million. First the city established a number of waterfront parks, including Fort Independence Park, to provide the public with access to the water. More significant, however, was the rapid growth of seaside resorts on Narragansett Bay. These were made accessible to the public by a fleet of excursion steamers leaving from the docks of South Water Street, Fox Point, and India Street. Such steamships as the *Bay Queen*, *City of Newport*, *Rhode Island*, *Mount Hope*, *Priscilla*, and *New Shoreham* became familiar to thousands of passengers as they traveled to Crescent Park, Rocky Point, Oakland Beach, Newport, Narragansett Pier, and even Block Island. At these locations were attractions ranging from dining halls and floating taverns to amusement parks, yacht races, and gambling. The less affluent thronged the beaches and picnic areas, while the exclusive sporting crowd was drawn to the casinos and private clubs.²¹ The steamboat-excursion era gradually came to an end during the first decade of the 1900s as a result of several factors. Of considerable consequence was the expansion of trolley lines to the major resorts, which resulted in a reduction in travel cost and time. Then came the development of the summer cottages—bungalows and mansions—which not only took over the coastal landscape but also replaced the need for hotels, boardinghouses, and dining halls.²² Perhaps the final blows to the shore-resort era came with the proliferation of the automobile, the 1929 Wall Street crash, and the destruction caused by the hurricane of 1938. The last bay steamer was consigned to the junkyard in 1940.

As the Providence waterfront continued its expansion and development, the quality of the environment was notably affected. Pollution control was virtually unheard of in the nineteenth century, and the raw waste generated by various activities was

directly discarded into the waterways. As early as 1790 the noxious industries of the sea trade had led to an outbreak of yellow fever among the working class at India Point. On the Woonasquatucket and Moshassuck, storm runoff and industrial waste directly entered the water from a large number of manufacturing plants. The discharge of domestic sewage into rivers was further accelerated in 1874 by the construction of 40 miles of sewer lines with three thousand private connections throughout the urban area.²³

In 1883 a plan was proposed for a comprehensive system of intercepting and treating the sewage before its final discharge. A sewage treatment plant, with precipitation tanks and sludge processing, was completed in 1903 near Sassafras Point. By this time a total of 175 miles of sewer lines provided service for almost the entire built-up area of the city. The pollution of the rivers was not abated by these efforts, however, because textile mills outside the city limits continued to discharge raw sewage into the area's streams.

Twentieth-century urbanization. The urban growth associated with the Industrial Revolution culminated with Providence's reaching metropolitan status at the opening of the twentieth century, when it ranked twentieth in size among U.S. cities. By 1930 the city's population reached a quarter million, with immigrants and their children accounting for seven out of every ten residents. Textile and machine-tool manufacturing, which had expanded rapidly during the Civil War and then reorganized for peacetime production, were major industries. Providence became the nation's leader in jewelry manufacturing and the production of wool and worsted goods, employing some eight thousand workers in each industry. The central business district took on many of its modern characteristics, including traffic congestion, a concentration of services, and a totally neglected and covered urban river system.

On the southern waterfront the narrow strip of land bounded by Interstate Highway 95, Point Street, and the Cranston city line dominated the

22. Stanford E. Demars, "Nineteenth Century Shore Resorts on Narragansett Bay," *Proceedings, New England-St. Lawrence Valley Geographical Society*, 1975, 54.

23. Cady, *Civic and Architectural Development*, 146.

city's port facilities in the twentieth century. The industrial and port uses of this reclaimed area developed in conjunction with the construction of Allens Avenue and several railroad tracks running parallel to the harbor line.²⁴ The headlands further south, formerly known as Pomegansett Peninsula, were also enlarged with dredge fill for municipal and transportation uses. Throughout the nineteenth century this area had remained largely undeveloped because of its relative isolation from the central city.

The first comprehensive plan for Field's Point was formulated in 1872. The area was to include an extensive harbor infrastructure, a new harbor line, and additional railroad connections. The land created by filling Sassafras Cove was leased to oil companies, which used it for oil storage tanks, and the Terminal Warehouse Company built several imposing warehouses nearby on Allens Avenue. Military activities also brought about land-use changes at Field's Point during this time. In 1917 the army took over some of the sites formerly occupied by summer resorts and removed the Revolutionary War fort built in 1775. Later, during World War II, the Rheem Shipbuilding Company was given a contract by the U.S. Maritime Commission to build sixty-four Liberty ships and combat cargo vessels.²⁵ These defense-related facilities were gradually abandoned after the war. Since that time developments on the waterfront have focused on modern shipping and light industrial uses.

Shipping activity in southern Providence was stimulated by the cooperative action of the city, the state, and the federal government. Major dredging operations were carried out for the first time under the Federal Rivers and Harbors Act of 1899. These resulted in deepening the anchorage area south of Sassafras Point by twenty-five feet and widening the navigational channel by six hundred feet. Continued dredging was undertaken in the early decades of the

1900s by the Army Corps of Engineers. These improvements were not without difficulties, however, because less than 10 percent of the shore property was in municipal ownership. Much of the harbor front was by this time occupied by coal and gas companies, lumberyards, dry docks, and other private enterprises. Providence mayor Patrick J. McCarthy (1907-1909) called for all waterfront property usable for harbor and dock purposes to be acquired for the people of Greater Providence and the future of Rhode Island, but this action was never taken.²⁶ In the absence of careful planning, the city had gradually relinquished any opportunity to control and develop much of the tidelands of the upper bay.

From the 1940s to the 1970s, the shorelands of metropolitan Providence suffered from old age, environmental deterioration, changes in transportation technology, isolation from the downtown area, and a decrease in population. Beginning with the post-World War II period, it became clear that Providence's economy was in decline from the prosperity of the preceding century. Textile mill closings were on the increase, and the returning servicemen added to a rising unemployment rate in the city. The widespread use of the automobile and the construction of highways encouraged the movement of people to the suburbs, and between 1950 and 1960 the city lost some 17 percent of its population to neighboring communities.²⁷ Compounding this loss of industry and people, the city's historic housing stock on the waterfront had deteriorated, was neglected, and became empty.

On the water, man's activities over the years had resulted in the accumulation of vast amounts of floating debris and derelict piers and vessels. This material was hazardous to navigation, visually unattractive, and detrimental to the development potential of waterfront property.²⁸ As a conse-

24. Wm McKenzie Woodward and Edward Sanderson, *Providence: A Citywide Survey of Historic Resources* (Providence: Rhode Island Historical Preservation Commission, 1986), 35.

25. *Ibid.*, 37.

26. Cady, *Civic and Architectural Development*, 198.

27. Woodward and Sanderson, *Providence*, 64.

28. Donald D. Robadue, *Providence Harbor: A Special Area Management Plan* (Providence: Coastal Resources Management

Council, 1984), 22.

29. William D. Warner, "The Providence Waterfront, 1636-2000" (Providence Foundation, 1985), chap. 2, p. 22.

30. City Plan Commission, *College Hill: A Demonstration Study of Historic Area Renewal*, 2nd ed. (Providence: City Plan Commission, 1967), vii.

31. Gerald H. Krausse, "College Hill, Providence: An Example of Inner-City Historic Preservation," *Proceedings, New England-St.*

quence, the Providence River became a source of embarrassment, and proposals were made for putting it out of sight. For example, a 1946 plan called for an expressway that was to run quite literally over the full length of the river, with underground culverts directing the flow of water.²⁹ Fortunately this plan did not materialize, but with the construction of Interstate 95 in 1957 the India and Fox Point area became totally isolated from the East Side, and most docking facilities on the waterfront there had to be demolished. Such was the fate of the river, as the public and the city of Providence continued to turn their backs on the city's waterways.

In 1986, however, Providence celebrated its 350th anniversary, and as the city looked back on the river's history, there emerged a popular determination to give the river a new face. This interest in revitalization was not an entirely new movement; the revitalization process was already under way in Providence in 1974, when the College Hill neighborhood was officially recognized in the National Register of Historic Places. Today that area contains more than 150 residences and 65 public buildings of the colonial and federal eras.³⁰ Over the past fifteen years several hundred buildings there have been renovated according to the guidelines established by the local Historic District Commission. More important, however, is the fact that College Hill adopted the guiding principle of "functional preservation"; that is, the principle of restoring the original appearance of an area's housing stock for the use of modern commercial and residential functions.³¹ This concept includes historic zoning, restoration of nineteenth-century buildings for twentieth-century uses, removal of obsolete structures, and development of tourist-oriented facilities. These measures have strengthened the residential stability of College Hill and promoted the

area's use for educational, commercial, and recreational purposes. It was this type of redevelopment approach that eventually spread to other neighborhoods, and to the river as well.

Since the mid-1970s many individual proposals and plans have been made to improve sections of the river and harbor areas.³² Few of these development plans are being implemented, but some progress has been made in the physical improvements of the port, and the abandoned Davol factory on Point Street has become a retail and office complex. The most extensive improvements under way are those related to the rehabilitation of the Field's Point wastewater treatment plant and the combined sewer-overflow treatment facilities serving Providence, Pawtucket, and North Providence. These facilities are operated by the Narragansett Bay Water Quality Management District Commission, which plans to spend nearly \$100 million over the next few years to bring the water quality of the upper bay into compliance with the National Pollution Discharge Elimination System standards. Another project, the Blackstone River Bikeway, is partially completed and will eventually link up with bicycle paths along the Seekonk and the East Bay.³³

The most comprehensive river revitalization effort currently under way is in the downtown area where the Moshassuck and the Woonasquatucket join the Providence River. This project calls for removing several bridges, relocating the confluence of the Moshassuck and Woonasquatucket, constructing new roads along the water, creating a waterfront park, and encouraging the development of marinas and buildings along the new riverfront.³⁴

The redevelopment efforts along the Providence waterfront have a variety of goals: to transfer deteriorated and vacant property to high-value uses, to employ open space for recreation more effectively, to improve the economic viability of the port

Lawrence Valley Geographical Society, 1976, 42.

32. Some of the more significant proposals include "Blackstone River and Canal Bikeway" (Department of Environmental Management, 1979); "Fox Point Triangle" (Mayor's Waterfront Development Committee, 1979); "Port of Providence 2000" (Engenium, Inc., 1980); "Capital Center Project Plan and Design and Development Criteria" (Skidmore, Owings & Merrill, 1980); "Fields Point Wastewater Treatment Plant Reconstruction"

(Narragansett Bay Commission, 1982); "Corliss Landing" (Robert Freeman, 1984); *Providence Harbor: A Special Area Management Plan* (Coastal Resources Management Council, 1984); "The Providence Waterfront, 1636-2000" (Providence Foundation, 1985); and "New Harbor Project: Development Summary" (New Harbor Partners, 1987).

33. Robadue, *Providence Harbor*, 14-20.

34. Warner, "Providence Waterfront," chap. 1, pp. 6-18.

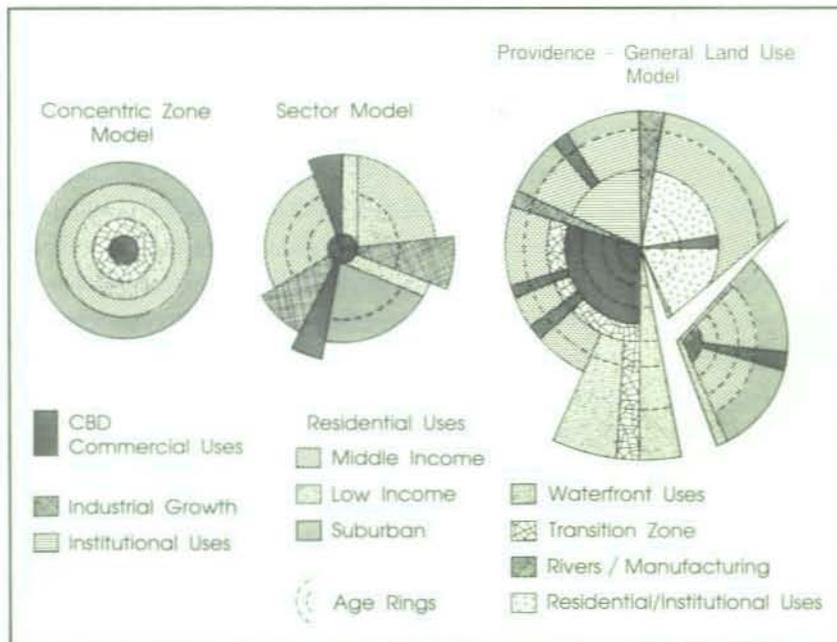


Figure 4. Spatial models

and related industries, to promote a diversity of land uses, and to reduce the impact of pollution on the upper bay. If these goals can be met in the not-too-distant future, the esthetic, social, and economic effects on the waterfront could be substantial and far-reaching.

Geographers have developed several spatial models in an attempt to explain the morphological and structural characteristics of cities. Some of these concepts may be applied to Providence for the purpose of identifying the impact the urban shoreline has had on the layout and land-use pattern of the entire city (see figure 4). These structural models are crude and unrefined, but they provide a basis for empirically testing the internal organization of the urban environment.

The concentric zone model. This model, formulated in the early 1920s, theorizes a land-use pattern that consists of several concentric rings, each dominated by one particular activity.³⁵ The idea is based on the premise that a city grows around a single nucleus, and that successive zones develop concentrically as the population grows. At the core is the central

business district (CBD); then follows a transition zone and a series of residential rings differentiated by population density and socioeconomic status.

A casual inspection of central Providence reveals numerous specialized areas reflecting changes in land use, accessibility, and history of growth. In the eighteenth century the emerging commercial district provided a variety of support services for the maritime trade; today diversified commercial activities and financial establishments occupy this downtown area. The zone of transition in part encircles the CBD and is characterized by mixed land use, including wholesale facilities, low-income

housing, and river-oriented industries. In South Providence this zone is fully occupied by port industries, oil terminals, the municipal wharf, and a major wastewater treatment facility. The transition zone in turn is surrounded by residential areas and related uses. For instance, the Providence side of the Seekonk River consists of open space, middle- and upper-income neighborhoods, hospital grounds, and recreational areas. Other urban rings are made up of residences distinguished by variations in social, economic, and demographic attributes. These rings, however, are not always clearly defined because of the distortions caused by rivers and the topography.

The sector model. An alternative model was proposed in 1939 by Homer Hoyt.³⁶ This model not only postulates a wedgelike expansion of land use but also recognizes the importance of transportation in the growth of cities. Hoyt assumed that once a contrast in land use has occurred in the central city, the differences are then perpetuated along major business arteries as the city expands.

In Providence all four rivers—the Seekonk, the Moshassuck, the Woonasquatucket, and the Providence—have contributed to the separation of sectors

35. Maurice Yeates and Berry Garner, *The North American City* (New York: Harper and Row, 1979), 187-209.

36. David Herbert, *Urban Geography: A Social Perspective* (New York: Praeger, 1973), 72.

METAMORPHOSIS OF THE PROVIDENCE WATERFRONT

radiating from the CBD. The East Side, Smith Hill, and the downtown area have become dominated by residential, institutional, and commercial uses respectively. Moreover, the expansion of sectors is further perpetuated by the layout of such major

roads as Smith Street, Atwells Avenue, Broadway, Cranston Street, and Allens Avenue. These and other well-traveled commercial strips radiate like spokes of a wheel from the center of the city to the periphery (see figure 5). Since these arteries have

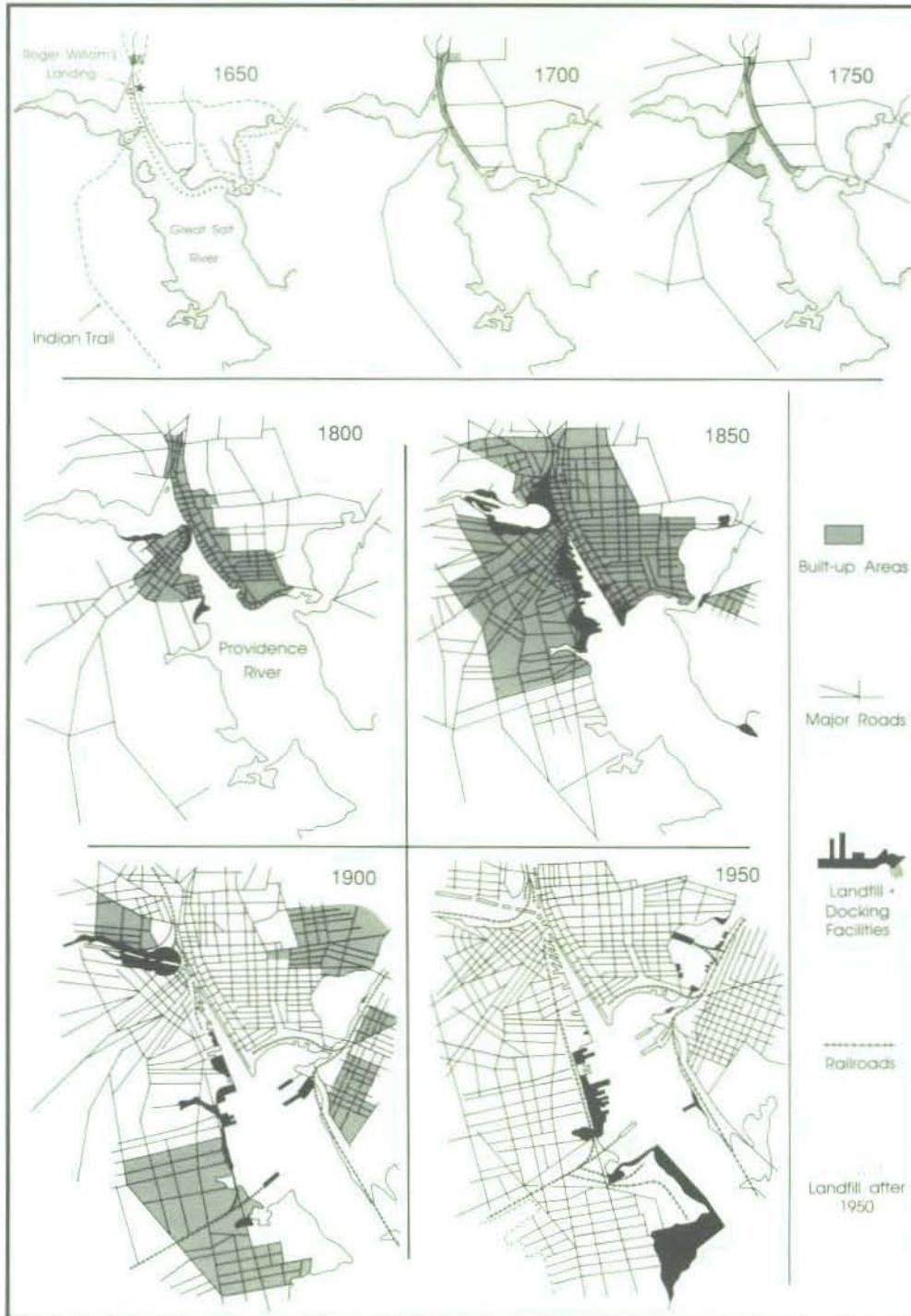


Figure 5. Structural changes and growth patterns, Providence River and port areas, 1650-1950

historically extended into the suburbs, land use there has also followed a definite sectorial path, reinforced by the introduction of municipal transportation.

The Providence model. There is an emerging consensus today that in cities like Providence, aspects of both models may be present. For example, the city's residential areas reflect variation in socioeconomic status more by sectors, while the age of the housing stock is more likely to show a concentric arrangement. A coexistence of the two models is further illustrated by the fact that age rings apply more directly to preindustrial Providence, when land-use zones developed more freely in all directions. The advent of the railroad, and later the automobile, imposed segregation of land uses, principally by sectors. Such early roads as North and South Main streets and Weybosset Street, and later the railroad tracks along the rivers, provided strong barriers to concentric zones. Sectors, on the other hand, created a strong impetus for the location of commercial and manufacturing activities along the waterfront. However, the uses of a sector usually were never completely similar at any one moment in time. The older, more centralized waterfront facilities were characteristic of the early days of maritime trade; as industrialization of the shoreline proceeded southward, port-related uses of a more recent period concentrated along Allens Avenue and Field's Point several miles away. Clearly the natural configuration of the Providence River and its tributaries had a strong influence on the pattern of land use from the perspective of both models.

The physical and economic conditions of the Providence waterfront have changed a great deal since the town's frontier days. The downtown area was then a marshy peninsula, and the Cove was

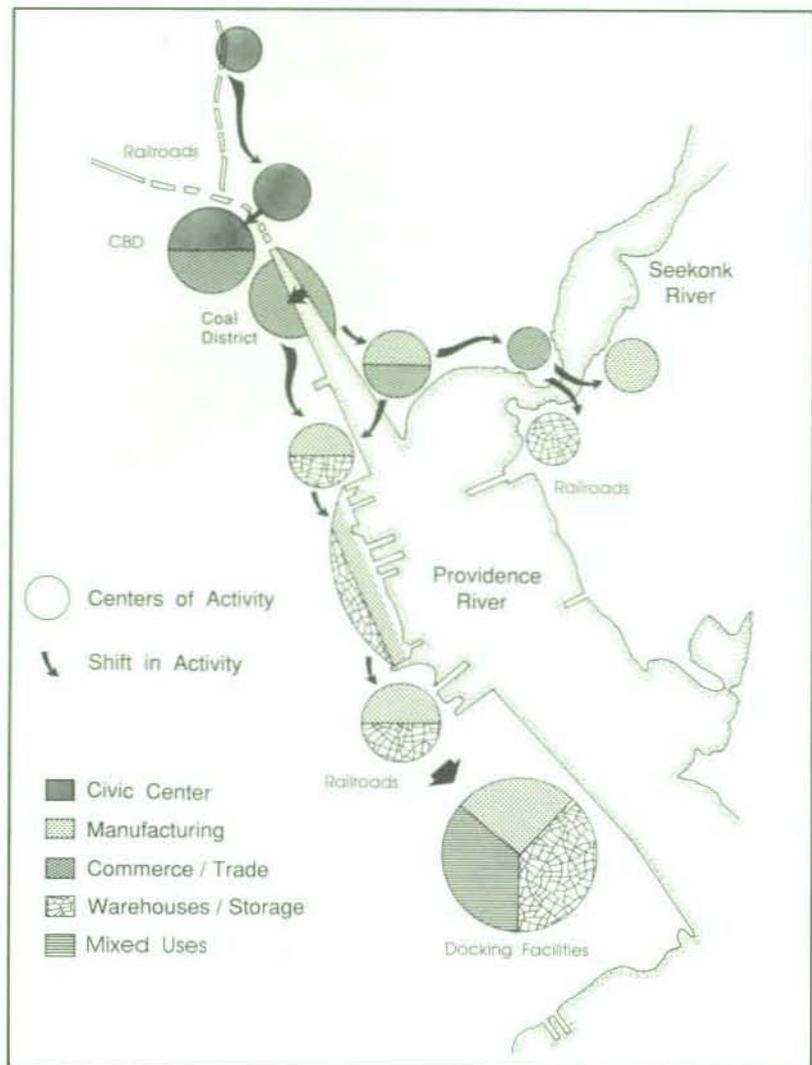


Figure 6. Development dynamics, Providence River and port areas

deep enough to accommodate full-size sailing vessels. Since then small inlets such as Sassafras Cove and Mile End Cove were gradually filled and now have totally disappeared from the map. The Providence River has been much reduced in size, and the only topographic landmark still recognizable today is College Hill. These physical changes have been coupled with profound modifications in the use of waterfront property. During its first 150 years, the settlement spread along the shore first as a farming community and then as a small seaport. Factories, coal sheds, and railroad tracks occupied the waterfront for another century. Today the urban

shoreline has lost its former marine-related function and is dominated by a proliferation of non-water-dependent uses.

Throughout its history the size and complexity of the urban waterfront increased dramatically as economic activities progressively moved southward (see figure 6). Initially the head of navigation was at the northern end of the Cove, where a grist mill, tavern, and boat landing formed the town's first nucleus. As farmers began to settle the Weybosset peninsula across the river, the center of the settlement shifted to Market Square. The first Weybosset Bridge, a movable span, promoted a steadier flow of goods to the hay market there while also allowing ships continued access to the Cove. At the height of the port's maritime trade, wharves, gangways, and storage buildings occupied both sides of the river. Wharfing out into deeper water allowed larger vessels to unload, but it reduced the width of the navigational channel and thus foreclosed the possibility that the upper river might later have been developed into a modern port.

As merchants outgrew the available space along South Main Street, they expanded their maritime

operations to the mouth of the Seekonk River. The waterfront from Fox Point to India Point developed into a center of steamship transportation and shipbuilding when dredging improved navigation in the area. By this time the Cove Basin had been filled to accommodate the railroad, and thus the oldest portion of the waterfront had disappeared. By 1900 several port improvement plans were suggested to create a modern port complex as far south as Field's Point, where the railroad, facilities for oil storage, utilities, and long finger piers could all be easily accommodated. The usefulness of the upper river was further reduced when it was decked with several bridges to meet the growing popularity of the automobile; and when the 1938 hurricane washed away its remaining water-related facilities, Providence's inner harbor became obsolete.

Today there is much interest in the abandoned portion of the Providence waterfront and in opening the river system once again as an urban amenity for all residents to enjoy. If history does indeed repeat itself, then the focus has come full circle as the tradition of using the river as an economic and recreational resource continues.



Life on the Bay: Logs of the Jamestown and Newport Ferries

Stewart P. Schneider

The Jamestown and Newport Ferry Company, which was owned by the town of Jamestown, inaugurated service between Jamestown and Newport in May 1873. The company also began a

ferry route across the West Passage of Narragansett Bay in the summer of 1888, a service it continued until July 1940.¹ In June 1951 the company was leased by the state of Rhode Island, and the state

East Ferry, Jamestown, circa 1890. Carriages and wagons were soon joined aboard the ferries by automobiles and trucks. Courtesy of the Jamestown Historical Society.



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1. The route across the West Passage originally ran from the west side of Jamestown to South Ferry in what was then South

Kingstown (later Narragansett). In 1895 the western terminus was moved to Saunderstown, although the ferry continued to call at South Ferry that summer. The stop at South Ferry was dropped in 1896. The West Ferry route was discontinued after the opening of the bridge between Jamestown and North Kingstown.



In this 1891 view, the steamer *Conanicut* sails past the naval training ship *Constellation*, moored to her left. Not until the building of the Mount Hope Bridge (1929), the Jamestown Bridge (1940), and the Newport Bridge (1969) was waterborne transportation between Aquidneck and Conanicut islands and the mainland completely replaced by the automobile. Courtesy of the Jamestown Historical Society.

operated the line, which it purchased in 1956, until the opening of the Newport Bridge on 29 June 1969.

The ferry company owned eleven vessels during its lifetime, four of which (*Jamestown*, 1873; *Conanicut*, 1885; *Beaver Tail*, 1896; and *Governor Carr*, 1927) were built for the company.² An authentic picture of what it was like to work and travel aboard the ferries in the first half of the twentieth century can be found in the logs of these vessels. These logs include the captains' day-by-day records of the operation of the ferries, heightened by reports of episodes that occasionally enlivened the daily routine, sometimes in dramatic ways.³

The earliest surviving log, that of the *Beaver Tail* for 11 April 1900 through 9 September 1912, is little more than a record of the dates and times of the mandatory fire and lifeboat drills. Eventually, however, the logs came to include every occurrence that the captains considered important enough to

record, from the unannounced visits of steamboat inspectors to unruly behavior among the passengers.

Beginning in 1914 the log entries assumed a standard format, which included weather and wind conditions and the barometer reading at the beginning and the end of each watch, as well as any significant changes in the weather during the course of the watch. Passenger counts, and eventually the number of vehicles carried, were also recorded.⁴ The names and titles of crew members were added to the log entries shortly after the United States entered World War II.⁵ Accounts of nonroutine events worthy of record were interspersed among these standard items of information.

The ferry company was established to provide reliable and economical transportation for passengers and freight between Jamestown and Newport. Although carriages and wagons were carried, the transportation of vehicles was not the primary function of the ferry line during its earlier years. This situation gradually changed as the increasing use of the automobile and the shipment of freight by truck turned the company's two ferry routes into integral links in the state's highway system.

When the ferries first began to carry automobiles, the directors of the company decided "that 2 seated automobiles be classed as double teams and those with one seat as single teams and charged accordingly."⁶ In 1912 the wheelbase of the auto replaced the number of seats as the basis for classification: autos with wheelbases under one hundred inches were classed as single teams, while those with wheelbases of greater length were classed as double

2. The last two vessels to operate between Jamestown and Newport were bought by the state after it purchased the ferry company.

3. The following account is based on the logs of the *Beaver Tail*, *Conanicut*, and *Governor Carr* through June 1951 (when the ferry

company was leased by the state), along with information found in the minutes of the board of directors meetings from 4 Apr. 1899 through December 1951. This material, with other surviving records of the company, is housed in the Special Collections Department of the University of Rhode Island Library.

teams.⁷ Eventually the company adopted a uniform rate for passenger cars unrelated to the tariff for teams, and references to teams are seldom found in log entries after the 1920s. "Vehicles" replaced "Teams and Autos" in the logs' daily vehicle count, which was later broken down into separate figures for autos and trucks.

The increasing size and weight of trucks caused problems for the company. Not only did trucks occupy a disproportionate amount of space on the ferries, but outsized or overloaded trucks often caused damage to landing facilities and vessels. An entry in the *Governor Carr's* log for 7 November 1940

is representative of similar reports of damage caused by trucks. "2:30 P.M. Harris truck loaded with lumber went through planking Newport apron. Delayed two hours and fifteen minutes."

Jamestown residents who worked in Newport commuted to their jobs on the ferry, and reduced fares for commuters were instituted at an early date. For many years the ferry made a special stop at the Naval Torpedo Station on Goat Island to accommodate Jamestown residents who were employed there.

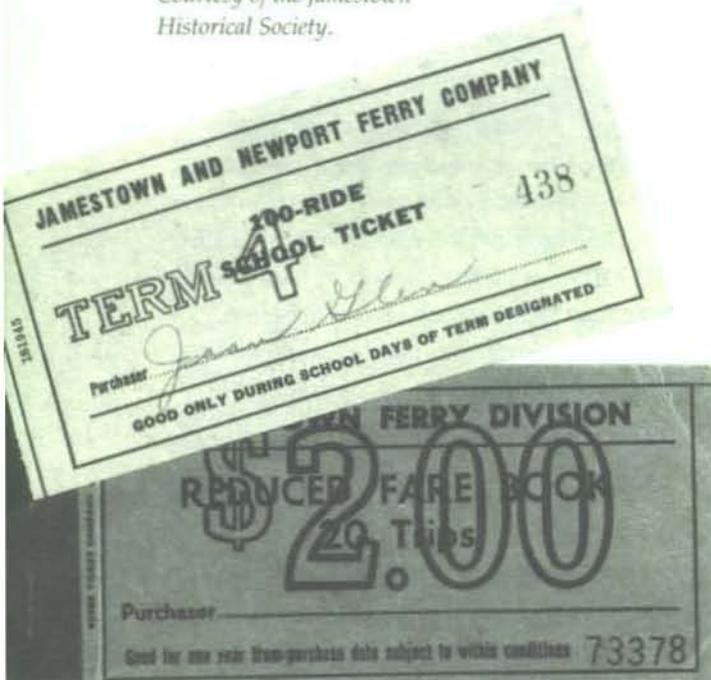
Since Jamestown did not have its own high school, students traveled on the ferry to attend high school in Newport. As noted in the account of the *Governor Carr's* encounter with the 1938 hurricane (see below), the ferry barely managed to get seventy high school students back to Jamestown before the full force of the storm struck. In December 1944 the company's general manager reported that "an apparent uncontrollable condition exists on school trips in heavy seas," and the directors voted "that the Gen. Manager be authorized to discuss [the] situation with [the] school committee."⁸ Very likely the students found the trips in heavy seas more exciting than the routine voyages in calm weather.

Jamestown residents who required hospitalization were also taken to Newport on the ferry, which sometimes made special trips in the middle of the night to get expectant mothers there on time. "Baby case. Mrs. Lamm to Newport," states the *Governor Carr's* log for 17 April 1949. "Left Jamestown 12.10 a.m. Arrived Newport 12.20 a.m." The captain did not note whether the newborn was a boy or a girl. A thank you note inserted in one of the *Carr's* logs leaves no doubt about the outcome in another case:

Dear Captain Fillmore,

I wish to extend my grateful thanks to you and all the men of your crew for taking me to the hospital the night of April 23. I must apologize for not writing sooner to thank you for the time and trouble spent in the extra trip; the

These school and commuter ticket books are on display in the Jamestown Historical Society's Ferry Room. Courtesy of the Jamestown Historical Society.



4. Daily reports on the number of passengers carried were included in the *Beaver Tail's* log beginning 14 Oct. 1914. Reports of the number of vehicles carried do not appear regularly until the mid-1920s.

5. The names of crew members for each watch were first included in the *Governor Carr's* log on 19 Dec. 1941.

6. Minutes of the board of directors meeting, 3 May 1904.

7. *Ibid.*, 5 Dec. 1911.

8. *Ibid.*, 22 Dec. 1944.

little girl born that night has kept me pretty busy ever since. It was wonderful to be met with such prompt service in that emergency.⁹

On one occasion one of the captains took the ferry to Newport during the night to fetch a doctor for a member of his family. After some deliberation the directors of the company voted "that the account against Capt. MacDonald for trip of the Ferry boat to get physician for his family be discharged."¹⁰ The directors also authorized the general manager "to make such theatre trips as may to him seem necessary for the convenience of the public."¹¹

Hay grown on Jamestown was taken to Newport by ferry for the livery stables there. Because of its highly combustible properties, it was carried on special trips requiring authorization from the Steamboat Inspection Service, as noted in the *Beaver Tail's* log for 11 March 1921: "2.00 P.M. Special Hay Trip. Permit from U.S. Ins." With the increasing use of the automobile, the entries for hay trips were replaced by entries for extra trips necessitated by the volume of auto traffic, especially during the summer season.

Delays and interruptions in service were caused most frequently by adverse weather or mechanical problems on the ferries. Severe weather occasionally forced a ferry to turn back after it had left the slip or to spend the night in Newport instead of returning to Jamestown on its final trip of the day.

The most destructive weather event in the company's history was the hurricane of 21 September 1938, a detailed account of which is included in the *Governor Carr's* log.

Left Newport at 2 30 P.m. with 3 cars and 70, school Children for Jamestown wind Blowing strong S.E. with rain. Arrived in Jamestown at 2 50 P.m. wind increasing to gale force, was ordered to stay in slip. Layed in Jamestown slip while gale was increasing in force Tried to secure her in slip, 3 15 boat secured and holding her off dock under difficulty, 3 30 P.m. tide rising very fast Tide rose 3 or 4 feet in 30, minutes.

At three-thirty Captain Knowles came aboard to assist Captain Fillmore. In retrospect, no doubt,

Knowles related what took place during the remainder of the afternoon:

Came aboard Str. Gov. Carr 3.30 P.M. Guards over and riding and pounding on piling. This bringing a tremendous strain on hull and danger of piling going through bottom. After parting nearly a hundred fathom of hawser and piling giving way continually. This forced us to leave for Newport. At about 5.55 P.M.? With 3 cars and 12 Passengers on board.

When half way to Rose Island Engine informed Pilot house Engine was disabled with something in propellers. We prepared the anchor and as the strong S.E. Gale was forcing us on the beach we immediately put the anchor over. Anchor did not hold and we were forced on the . . . beach. About one 1/2 mile North of Jamestown East Ferry Landing at about 6.30 P.M. Vessel brought up on beach and we were able to land our twelve passengers in safety with our ladders. 3 automobiles still on board. When tide fell found a hawser in one propellor. Three automobiles secured. Crew standing by. Vessel laying on bilge and no holes in bottom.

The three autos were finally removed by means of a ramp on 7 October, but the *Carr* was not refloated until 7 December¹² and did not return to service until 21 February 1939, five months after she was blown ashore by the hurricane.

The *Carr's* running mate *Beaver Tail* also attempted to reach the more protected waters of Newport harbor during the storm, and she too was blown ashore. The forty-two-year-old vessel was so badly damaged that repairs were deemed impracticable. The third of the company's ferries of that period, the *Hammonton*, rode out the hurricane in the less exposed West Jamestown ferry slip and incurred only minor damage.

Extreme tides or heavy seas sometimes made it difficult or impossible to load or land teams and vehicles, as the *Beaver Tail's* log for 21 August 1921 relates: "9 15 at Fort Greble horse driven by Enos Gomes & belonging to Joseph Martin broke leg in landing. Cause heavy sea." Another entry in the *Beaver Tail's* log states, "Stripped plug from transmission of automobile belonging to Holton Smith Jamestown, unavoidable due to heavy sea."¹³

9. Letter from Marian Whipple dated 4 June 1946, inserted in *Governor Carr's* log for 1 May 1945-17 Sept. 1946 between pages 34

and 35. The extra trip is recorded in the log entries for 23 Apr. 1946.



Heading from Jamestown to a more sheltered berth at Newport during the hurricane of 1938, the Governor Carr was disabled and driven onto a Jamestown beach when one of its propellers became entangled in a line. The vessel was refloated two and a half months later by a marine salvage company and workers from the WPA. Photo from the Jenny Clarke Collection, courtesy of the Newport Historical Society.

Fog often reduced visibility on the bay and increased the danger of running aground or of colliding with other vessels. On the evening of 6 December 1912 the *Beaver Tail* ran aground on Rose Island while feeling her way toward Jamestown in the fog:

Left Newport 5.11 P.M. for Jamestown Str. *Beaver Tail* rounded Breakwater Light gave Qtmstr. Tefft course W1/2N and I was on lookout there being a barge nearly in our course. When the time was nearly up we brought up on the East side of Rose Island. I looked at the compass at once and she was heading N.W.3/4N. I blew the whistle for assistance and sent the purser ashore for assistance.

The launch H. M. Champion and a launch from the Torpedo Station took the passengers to Jamestown, seventy-one in number.

There was a hole in her bottom on the starboard side well forward.

We were able to keep her free of water until the main steampipe gave way. It being low water at the time not much water came in. They got the boiler in commission in the early morning and with the help of the tug *Solicitor* soon freed her of water.

An attempt was made to haul her off Saturday night, which failed.

She was hauled off Sunday morning with the help of two tugs and a steam lighter, and towed to Newport. A diver patched hole and she is leaking very little.

Captain Petty then adds this important detail: "I forgot to mention that I had two men stationed on the bow on the lookout."

10. Minutes of the board of directors meeting, 2 Jan. 1900.

11. *Ibid.*, 6 Nov. 1901.

12. A detailed account of the refloating of the *Governor Carr* was entered in the log for 7 Dec. 1938.

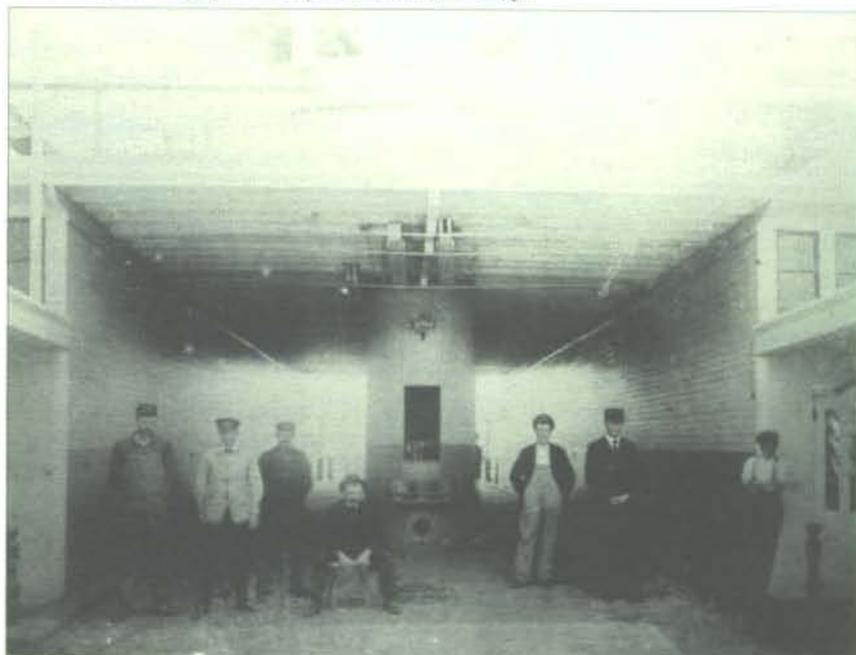
13. *Beaver Tail* log, 8 Dec. 1927.

Fog was also a factor in a collision between the *Governor Carr* and a destroyer on 28 June 1950:

Left Newport 4.40 P.M. Rounding Goat island north light 4.46 hearing the fog signal on my starboard bow. running under slow bell my lookout reporting to the pilot house a destroyer. I looked and only could see a white number and his bow. he blowed 1 time and I did the same. I see that he was under way coming straight for me I rung in and full astern and blowed 3 blast on my whistle and he keep coming at me my ingines full astern white water well ahead of my bow and I was going astern. I ordered all passengers to get off the bow. All did. It was 4.48 P.M. when the distroyer struck. After the distroyer struck she droped anchore and blow her siren. I then stoped backing getting the numbe of the distroyer and asked if my plates were O.K. I then ordered my deck hand to check forpeak for damage and water that was o.k. then I got underway for Jamestown I reported damage to the company. and also to the inspectors U.S.C.G.

Fog was not involved, however, when on 6 April 1922 the *Beaver Tail* "came near being struck by a Torpedo from the Torpedo Scow in Newport

The crew of the Beaver Tail (with Captain Ben Gardner, seated) in 1904. The Beaver Tail ran from West Ferry, Jamestown, to Saunderstown. Photo from the Jenny Clarke Collection, courtesy of the Newport Historical Society.



14. *Ibid.*, 4 Mar. 1934. Service on the West Ferry was not resumed until that date.

15. *Conanicut* log, 27 May, 31 May 1915. The *Conanicut*'s logs for the years before the fire of 14 Sept. 1914 are missing and may

have been aboard the vessel when she burned.

16. During the summer season the 8:20 p.m. trip from Jamestown made a stop at Long Wharf in Newport to leave Harbor, off Newport Light." Apparently the scow was being somewhat careless about where it aimed its charges.

Fortunately the ferries were more likely to collide with the arms and bridges of the ferry slips than with other vessels. Such accidents were usually the result of the engine's failure to reverse as the ferry entered the slip. When the *Beaver Tail* hit the slip at West Jamestown on 27 June 1931, Captain Champlin reported, "Engine unable to back and boat hit with considerable force, injuring two passengers, slightly damaging two automobiles. A survey of the boat showed that no damage or injury has been done to it, neither to the dock."

The necessity of running at reduced speed often caused delays during foggy weather, but ice could sometimes tie up the boats altogether for extended periods. Conditions were especially severe during the winters of 1914, 1918, and 1934. On 4 February 1918 the *Beaver Tail* was "unable to land in Newport on account of ice, returned to Jamestown and later made trip to [Fort] Adams for mail." The log entry

for the following day notes that there were no trips in the afternoon. After the *Beaver Tail* had battled heavy ice in the West Passage for more than two weeks in the winter of 1934, the general manager finally gave up and ordered the boat tied up from 23 February until 1 March.¹⁴

Not all delays were caused by the hand of nature. A firemen's strike held up the *Conanicut* for fourteen minutes on 29 June 1923; on 7 July 1930 the *Governor Carr* ran out of coal and had to delay her departure from Newport by twenty minutes. At 9:15 a.m. on 11 December 1929 the *Carr* "stopped for one minute out of respect for John Brazil," a longtime ferry company employee.

14. *Ibid.*, 4 Mar. 1934. Service on the West Ferry was not resumed until that date.

16. During the summer season the 8:20 p.m. trip from Jamestown made a stop at Long Wharf in Newport to leave

During the night of 20 September 1914 the *Conanicut* caught fire in Jamestown's East Ferry slip. The hull and engine were saved by intentionally sinking the vessel in the comparatively shallow water, but her superstructure was destroyed. She was rebuilt the following spring and returned to service on 31 May 1915.¹⁵ Another fire aboard the *Conanicut* on 8 September of that year was extinguished before it caused serious damage ("At 7 20 [P.M.] had a slite fire under ash pan burnt one of the timbers about half in too"). On 30 December 1944 the *Governor Carr's* stack caught fire ("8 00 Trip out of Jamestown stack caught a fire sparks was falling on deck had to use Fire hose to put them out"), as did her mop on 19 January 1947 ("one of our passengers discovered smoke in the men's Toilet. And Cabin. We discovered it was a mop burning. No damage but plenty of Smoke. We used extinguisher to put out fire in mop").

The crews of the Jamestown and Newport ferries were called on to help extinguish fires on other vessels more frequently than they were required to deal with fires on their own boats. On 22 September 1917 the *Conanicut* responded to a call for assistance from the steamer *Thetis*.

On the 8.20 P.M. trip from Jamestown the S.S. *Thetis* of the Prov. & Phila. Line signaled us for Asst. When within hailing distance the Capt. of the *Thetis* asked us to stand by as he had a small fire aboard.

We passed him a line of hose and pumped water to him ten minutes.

By this time the tug *Narragansett* was alongside and another large towboat standing by.

I asked the Captain of the *Thetis* if he required our assistance any longer? He replied, "We are all right now, Captain, Much Obliged!"

We left him and arrived at Long Wharf barely in time to land our New York passengers.¹⁶

On one occasion the *Governor Carr* went to the aid of a vessel that appeared to be on fire, only to discover that the smoke was coming from a submarine's exhaust.¹⁷

The crews of the ferries also came to the aid of disabled craft and rescued boaters in distress. As darkness fell on a December evening in 1914, the *Beaver Tail* picked up a catboat with a disabled rudder and "took her in tow to Newport."¹⁸ On another occasion she "picked up three men & a girl from the water . . . from an overturned canoe,"¹⁹ and the *Governor Carr* once rescued "two boys and a skiff off Rose Island."²⁰ On its last trip to Newport on the night of 17 June 1947, the *Carr* responded to a call for help from sailors whose boat had overturned in Newport harbor:

11.15 pm Lowered boat East of Ft. Adams dock after hearing call for help and sighting capsized sail-boat. Life-boat in charge of George Cadoutte, Quartermaster, picked up Jean Coogan, Jean Harrison, & Hoyle Hodgson. 11.43 pm proceeded to Newport. Dried out passengers in fire-room. Docked Newport at 12.00 Midnight. One of men on sail-boat swam to Fort Adams so that all were saved.

Working aboard the ferries could be hazardous, especially during severe weather. On 20 January 1922 George Brown fell into the water from the platform of the *Beaver Tail's* A-frame as the boat was tying up in Jamestown; presumably he survived his icy bath, although the captain omits mention of this detail in the log. Captain Reuben Garlick had to be carried off the *Governor Carr* after he fell on an icy deck and injured his left leg.²¹ Captains reported their own injuries as well as those sustained by members of their crews. Thus Captain Knowles recorded in the *Governor Carr's* log for 20 December 1948, "Jammed my finger 5.34 P.M. In pilot house door."

Captains usually took care of minor injuries, but crew members with more serious injuries were sent to a doctor. When Alfred Lopes received "a slight cut on his hand," the captain "gave him iodine which he put on it," but when Lopes mashed a fingertip in the gate on the main deck, the captain sent him to the doctor after applying first aid.²²

The risk of getting burned or of being injured by machinery was always present in the engine rooms

passengers who were en route to New York via the Fall River Line.

17. *Governor Carr* log, 24 Oct. 1950.

18. *Beaver Tail* log, 13 Dec. 1914.

19. *Ibid.*, 2 Aug. 1927.

20. *Governor Carr* log, 6 May 1931.

21. *Ibid.*, 28 Nov. 1949.

22. *Ibid.*, 9 June 1941, 20 Feb. 1942.

of the vessels, and the logs record numerous instances of such accidents. An oiler on the *Beaver Tail* died of injuries received when he was crushed between the connecting-rod bearing box and the rod that tied the A-frames of the engine together.²³ When the *Governor Carr* blew a boiler tube on 4 August 1950, "William Broadhurst Jr. Fireman, reported injury to his toes in hot water from boiler, at 6.45 am when the tube let go in the port Boiler." When Joseph R. Brazil caught his foot in the crank of the *Governor Carr's* engine, the captain "ordered him to the doctor at once. But he insisted on finishing the days work. . . . He said his injury consisted mainly off [sic] the loss of a toe nail and has promised to see the doctor as soon as he gets through work."²⁴

Vehicles, especially trucks, sometimes posed a danger to members of the crew. On 23 December

1940 a "Standard Oil truck came off boat so fast bridge in Jamestown could not be lowered fast enough. Manuel Viera tried to stop truck, but driver would not stop. *Viera had to jump and run to avoid being injured.*"

Dogs could be a menace to both passengers and crew. Frank Jordan of the *Governor Carr's* crew was "bitten by [a] dog in [an] Automobile. No. of Car 6W12.42 N.Y. Chrisler. Frank Jordan went to Dr. Lyman and had it dressed." A young passenger aboard the *Carr* also required medical attention after she was bitten by a leashed dog.²⁵

Not all injuries to crew members were sustained in the line of duty. "Deck hand DJ Watson Jr. Broke his leg Fooling with one of the passengers in the men's cabin," reported the captain of the *Beaver Tail*



Autos waiting to board at West Ferry, Jamestown. The West Passage run from Jamestown to Saunderstown was discontinued when the Jamestown Bridge opened in 1940. Increased auto travel, damage sustained by West Ferry during the 1938 hurricane, and the military presence in lower Narragansett Bay at the onset of World War II all contributed to the need for a new route between Jamestown and the mainland. Courtesy of the Jamestown Historical Society.

23. Wilfred E. Warren, "Safety Record," in *The Jamestown Ferryboats, 1873-1969* (Jamestown, R.I., 1976), n.p.

24. *Governor Carr* log, 17 Sept. 1946.

25. *Ibid.*, 17 Aug. 1940, 26 May 1951.

26. *Ibid.*, 23 June 1941.

27. *Ibid.*, 12 July 1947.



Passengers gather along the rails to enjoy a scenic cruise as the Governor Carr sets sail for Jamestown from Long Wharf in Newport circa 1930. RIHS Collection (RHi X3 6482).

on 3 July 1920. "Sent for Dr. Sweet who removed him to his home."

Most injuries to passengers resulted from falls. On 12 October 1922 the *Beaver Tail's* "after upper deck rail gave way, due to passengers leaning over, 8 people thrown to deck 4, apparently more or less injured."

Sometimes, by accident or design, passengers ended up in the water. On 21 November 1918 "on the 2 P.M. Trip out of Jamestown a man Passenger Jumped over board [from the *Beaver Tail*] off Rose island, a Life Ring was thrown to him and he was hauled on Deck." Probably the water temperature induced a change of mind. On 29 August 1920 the *Conanicut's* departure was delayed "by [a] man falling overboard after the last whistle on 8.20 P.M. trip. Got him out unhurt," the captain noted. "Man would not give his name. Could not find out circumstance."

On occasion passengers became unruly and had to be restrained. Crew member Walter Bollons required medical attention after he hurt his side

28. *Ibid.*, 15 July 1936. The Jamestown Bridge referred to here was the landing bridge of the Jamestown ferry slip; the highway bridge between Jamestown and North Kingstown had not yet been built.

"quelling a disturbance among passengers."²⁸ On 30 April 1947 "some of the high school Girls had a Fight in the Lady toilet [of the *Governor Carr*]—(and one of them . . . was hurt)." Sometimes the police were called on for assistance. One night two sailors stole a handbag from a naval officer in civilian clothes; "When boat docked in Newport, Newport police & Shore patrol took sailors off."²⁹

Drivers occasionally became abusive if their cars were damaged, as this entry from the *Governor Carr's* log indicates: "Car collided with Lug on Jamestown Bridge Little damage to running board of car. Owner used profain language to

Crew."²⁸ Another entry notes that a woman drove her new Pontiac into the side of the boat.²⁹

Despite the board of directors' ruling that "the Captains of the boats of this company be and are hereby instructed not to take any indecently intoxicated passenger aboard the boats,"³⁰ the inebriated managed to get on board. On 8 July 1925 the captain of the *Beaver Tail* reported that he "found door in men's toilet broken; damage evidently done by drunken seaman from U.S.S. Texas." The serviceman referred to in a 26 November 1944 entry in the *Governor Carr's* log also appears to have been indecently intoxicated: "William Clarke Pur. Reported man in uniform using profane language and annoying men and women passengers. Refused to stop his talk and questioned Mr. Clarke's authority. I held boat away from dock and William Clarke called police and man in uniform was turned over to police."

Of even greater concern to the board of directors was the tendency of some crew members to patronize the saloons in the vicinity of Market Square

29. *Ibid.*, 22 Apr. 1949.

30. Minutes of the board of directors meeting. 3 Feb. 1903.

while their ferry was laying over in Newport. At a special meeting held to investigate the causes of accidents that had badly damaged the landing bridges at both Jamestown and Newport, the directors ruled that "all employees of the Jamestown and Newport Ferry Company be and are hereby prohibited from entering any saloon or bar room while on duty under penalty of immediate discharge."³¹ The problem persisted, however, and a few years later a more strongly worded directive was issued, declaring that

any employee of the Jamestown & Newport Ferry Co. seen in, going to, or coming from a barr-room or has the smell of intoxicating liquors on him shall be discharged and if a licence officer, it shall be reported to the Board of Inspection of this District.³²

After consulting with a member of the Newport clergy, the directors passed a still-later motion stating "that the ferry Co.'s attorney be instructed to appear in protest before licence commissioners against granting any licences on Market Sq."³³ There is no indication as to whether or not the protest was effective.

The ferry company provided service to Fort Greble on Dutch Island while that installation was active, and it also transported military personnel to other installations around the bay. On occasion the transportation of military personnel took priority over the company's service to the public; on 10 May 1927, for instance, the *Beaver Tail's* log notes that the regular schedule was suspended so that the vessel could carry government troops.

Log entries during World War I and World War II reflect the effects of war conditions on the operation of the ferries. At 2:00 p.m. on 11 June 1918 the *Conanicut* "received Orders from Government S.P. Boat not to leave slip at Jamestown—until 4. P.M." On 27 October 1918 Captain Fillmore noted that he "put time on [the *Conanicut's*] clocks back one Hour," marking the end of Daylight Saving Time,

which had been adopted for the first time earlier that year as a wartime energy conservation measure.

The *Governor Carr's* log for 10 December 1941 shows the ferry company's reaction to the events of the preceding few days: "8 00 Am. All passengers and (88) high school Children were instructed by Capt. A. G. Knowles and my crew in where to find Life Preservers. And how to put Life-Preservers On. And to Obey Orders from Captain & Crew, in Case of emergency." Fortunately the company's passengers were never required to abandon ship.

The working day for company employees was lengthened to ten hours starting on 28 April 1942,³⁴ and women's names began to appear on crew lists as replacements for pursers and ticket sellers who had entered military service. Blackouts were held periodically in coastal areas, as noted in the *Governor Carr's* log for 31 July 1942: "9.53 Pm. Black-Out in Jamestown, R.I. Str. Governor Carr Lights were all out 17 minuets [sic] while in Jamestown Slip."

In 1944 a passenger who had done her patriotic duty by contributing to the blood bank fainted on the way home from Newport: "Reported to pilot house at 4.20 Mrs. Finley one of the passengers had fainted. I sent J. M. Sherman to her assistance at once with first aid kit. Mrs. Hunt took charge of Mrs. Finley. It was said Mrs. Finley had given a pint of blood to blood bank."³⁵

Noteworthy events in the Jamestown-Newport area were sometimes mentioned in the logs. On 31 July 1937 the *Governor Carr's* captain observed, "Today is the Starting day of the big Races off Newport R.I. for the Americas Cup. Yacht Ranger sailed by Harold J. Vanderbilt And yacht Endeavour Sailed by T. O. M. Sopwith." The start of the Bermuda Race was noted in the *Carr's* log the following summer.³⁶

When Jamestown's chief of police was shot, the event was entered in the *Governor Carr's* log for 21 April 1935: "5 30 P.M. Chief of Police of Jamestown shot by Robert Donnelly. Layed in Newport slip

31. *Ibid.*, 7 July 1903.

32. *Ibid.*, 4 Jan. 1910.

33. *Ibid.*, 2 Nov. 1916.

34. *Governor Carr* log, 28 Apr. 1942.

35. *Ibid.*, 21 Feb. 1944.

36. *Ibid.*, 21 June 1938.

37. *Ibid.*, 12 Sept. 1934.

38. *Ibid.*, 2 Aug. 1940.

39. *Ibid.*, 10 Aug. 1947.

40. *Beaver Tail* log, 23 Feb. 1924-3 July 1926.

41. *Ibid.*, 1 Apr. 1931-31 Oct. 1934.

until 10 30 P.M. Chester Green in Critical Condition." A note appended to the entries in the *Carr's* log for 21 March 1945 states, "George C. Carr Director of the Jamestown & Newport Ferry Co. Died."

When the First Lady rode the ferry, the captain of the *Governor Carr* noted, "Mrs. Franklin D. Roosevelt was a passenger on our Ferris [sic] on the 5 00 P.M. Trip to Newport."³⁷ Her son's trip on the *Carr* was similarly recorded a few years later: "Franklin Delano Roosevelt Jr. passed over ferry 8.00 A.M. Trip."³⁸ The governor of Rhode Island also rated an entry, as did former world heavyweight boxing champion Gene Tunney.³⁹

Sometimes the boats carried unusual cargo. The *Carr's* log for 26 May 1935 relates, "4 00 P.M. Trip Carried one Elephant to Newport." A note in the margin explains, "Gorman Bros. Circus + 5 Ton Elephant."

Humor occasionally found its way into the logs, sometimes in the form of drawings or cartoons. One of the *Beaver Tail's* logs concludes with the observation "THUS ENDS A TALE OF WOE,"⁴⁰ and another begins with a drawing of a turkey clutching an oar.⁴¹ A finger in the margin of the *Beaver Tail's* log for 6 June 1923 points accusingly to an entry which reads, "Smith (deckhand) did not turn to until 8 A M J. Woodmansee worked one hour." A similar device highlights an entry stating that Captain Arnold worked seven and one-half hours overtime on 27 June of that year.

When there was nothing else of significance to record, the captains sometimes commented on the weather. Observations such as "cold, bleak weather" or "vicious rain and squalls" convey a much more graphic picture than the routine weather data recorded at the beginning and end of each watch. Thus the captain of the *Beaver Tail* characterized a

This photograph was taken by a passenger aboard the Jamestown-to-Newport ferry on 28 June 1969, its last day of service. On the ferry dock at Jamestown others are taking photos of that historic day as well. Courtesy of the Jamestown Historical Society.



warm July day in 1925 as “overcast, hot, and sticky,” but the engineer, whose quarters were much warmer than those of the captain, called the weather on 4 and 5 June 1925 “HOTTER THAN HELL.”⁴² On the last day of summer in 1941 the captain of the *Governor Carr* made note of the season’s passing with a paradoxical remark: “End of a perfect summer, but have seen better.”⁴³



Captain Herbert Pimental at the helm. Courtesy of the Jamestown Historical Society.

42. *Beaver Tail* engine room log, 4 and 5 June 1925.

43. *Governor Carr* log, 21 Sept. 1941.

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