LUMBER, SHIPBUILDING AND THE
EARLY CONNECTICUT RIVER TRADE

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The research, more than anything dictated the growth of this paper. Originally I wanted to study Abijah Savage's shipyard in Middletown, but information was very limited. So I continued by looking into the lumber industry and other shipyards in the area, hoping to find references to Savage. But that really didn't work either— all that happened was I got farther and farther from the Middletown Upper Houses. But still, I believe there was an integral economy, at least concerning river trade, lumber and shipbuilding, probably much more so than I have yet discovered. The ultimate result then, is that this is more a paper about several entrepreneurs in Connecticut. It is about several men who each started at different levels (economic) of the society and worked towards a better one. This alone is evidence that the economy allowed certain degrees of mobility, but it is important to remember that all these people were relatively prosperous, or they wouldn't have been written about in books or wouldn't have written about themselves or what they did, if they weren't in some way proud of themselves. Furthermore, the entire river basin was a prosperous area in general, and any industry related to lumber, fishing, shipbuilding, housebuilding and wood supplies, was secure and promised financial returns in most cases.
Adrian Block, a Dutch merchant and sailor, was the first white man to discover the Connecticut River. In 1613 he was sent to America to procure a cargo of furs, and one year later, with a full cargo ready to sail back to Europe, Block's ship the 'Tiger' caught fire in Manhatten harbor, and was lost. During that next year, Block and his crew lived in shacks near the waterfront and proceeded to build another ship. Timber on Manhatten was good and with the aid of the local Indians, the ship was completed and launched that spring, christened the 'Onrust'. In 1615 the sixteen ton vessel cruised up the Connecticut River before heading for home. The 'Onrust' was thought to be the first American built yacht, but further research revealed that a thirty ton vessel, the 'Virginia of Sagadahoc' had been built and launched by the Popham colony, of the Kennebec river in Maine, six years earlier.

It is important and interesting to recognize what the maritime interests in other parts of New England were at that time, and to see how merchant's and men's ambitions got lived out:

...Since the first European settlement, the Piscataqua River Basin has nurtured a shipbuilding industry. Good supplies of timber close to the sea, numerous rivers and streams to drive sawmills, and abundant fish stimulated the development of the industry around the basin system. Fishing in Maine was the first great industry. In 1630 fishermen were cleaning and packing their catch and the next ten years marked the first efforts to develop that industry. Efforts were also made to start home manufactures, to exploit the stands of timber, and to begin the building of ships. But by 1640 none of these ventures had grown beyond infancy, probably because merchants didn't see enough big returns. In 1650, contracts were drawn up for shipping mast trees to England. Shipbuilding then emerged mostly in order to meet the merchant's demand for their own transportation needs, as well as to meet those increasing demands for vessels by Englishmen and foreigners. A growing fleet was sold to the tobacco plantations of Virginia and Maryland. The Navigation Act of 1651 worked to eliminate foreign traders
and thus encouraged more New England shipbuilding, and increased the interests of the native merchants. But even at this early date (mid seventeenth century) the key to success was versatility—to specialize was to decline;

...The merchants reached deeper and deeper into the inland regions of New England seeking control of the resources they needed for the expansion of their trade, especially timber, rough for masts and spars, or worked into planks, pipestaves and barrels...With freight charges a considerable burden to a merchant, would it not be better for him to build his own vessels and add carriage and the vessel itself as salable commodities?

The answer was clearly yes, and merchants spread out their enterprises by buying sawmills and woodlots in New Hampshire. Merchants then proceeded to develop the lumber industry and started to open the Narragansett area of Rhode Island to cattle grazing. The shipbuilding industry was established and maintained, and merchants found avenues in the markets to peddle agricultural products, thus the immediate increase and growth of farms. Perhaps the Colonial government realized this tendency in merchants to diversify and wanted to ensure the integrity of at least the shipbuilding industry. In 1641 the General Court of Massachusetts, which included New Hampshire (1641-1680) and Maine (1652-1820), passed an act which provided for inspectors to survey work on vessels and building supplies, and levied substantial fines for transgressors.

Another reason for passing this act was that the shipbuilders were not all qualified shipwrights. Emigrant English shipwrights had to train a native labor force and the industry still relied on imported supplies, especially "nayles, spikes, lockes, hinges, iron work for boats and pinnaces, twine, canvis, needles, and cordage, pitch and tarr, graples and necessarie that purpose". In other words, there was probably a good deal of improvisation, or making do with what was available during the construction of early American craft, and provided for what was probably the first example of 'Yankee ingenuity'. Furthermore, many of the early builders were
fishermen who built their own craft during the winter months. Of course for some, shipbuilding was a full time occupation, but seasonal occupations were quite common (farmers) and as Dawley pointed out in *Class and Community*, fishermen looked for some kind of work during the winter, whether it was sewing shoes with their wives or building or repairing their boats, so that they could earn a better living.

The Connecticut River valley was probably not unlike the northern colonies in its development except it came later. The first white settlers came to Middletown in 1646. Farming was more important than fishing, so the river became more a means of transportation than a fishing ground (Although shad and salmon fishing were at times very profitable. Those seasons were quite short however, lasting only about six weeks).

Early river transportation was never easy, especially going upstream, but land carriage particularly in the colonial period was by comparison slow, costly and hazardous. The river channel was too shallow in some areas for larger ships and the task of deepening the channel to accommodate the larger vessels was recognized as early as 1789. There was a rivalry among several factions about who would control the construction and use the proposed valley canals. Merchants in New Haven encouraged valley farmers to support them because the canals would in turn, *enable* the farmers to sell their products in the New Haven markets. The success of the Erie Canal was a catalyst in this small but significant rivalry which ended with neither side winning.

A shallow draft steamboat, in an 1826 demonstration, went as far north as Barnet, Vermont (with periodic celebrated stops) which proved that steamboats could be used on the river, and put an end to the canal issue.

Canoes were one of the earliest types of craft used on the river. They were fashioned from the Indian dugouts which were cut out from riverbank trees. In Springfield it was found necessary to protect the 'canoe trees' from being spoiled. Orders prohibiting the felling of such trees, within
the bounds of plantations and without prior consent, were passed. Many of the seventeenth century vessels like ketches, pinks and shallows were built on the rivers lower banks from native timber. Before 1650 Hartford men were sending out their own built ships on distant voyages. The ships were loaded down with valley exports for barter and headed to such places as Boston, Newfoundland, New York, Delaware, Barbadoes and Jamaica for their products, most notably 'rumme'.

Flatboats were probably the best craft suited for river use (see drawing), and dominated river traffic even after 1829. Some of the earliest Springfield colonists built their own flatboats and apparently became quite skillful in running them over rapids. The boats only drew about two to three feet, and freight was packed in the middle of the boat near the mast. Flatboats had a square mainsail and a topsail sometimes used in light winds. Occasionally a third sail above the topsail was carried. If the winds were unfavorable, which they invariably must have been as I doubt that these square sailed craft could go well to windward, the flatboat had to be poled. Ox teams could help such craft over the Enfield Falls but otherwise couldn't be used. Poling the flatboat was called 'snubbing' along the shore, and 'setting poles' were the twelve to twenty foot white ash poles with socket spikes in the ends, that the spike pole man used. It was incredibly slow and laborious (one mph) to pole such a craft against the current (The Connecticut River is tidal as far north as Middletown). The setting pole was placed firmly in the river bottom and then shouldered by a man who walked, using all his force, from one end of the boat to the other. The pole men supposedly developed callouses as big as fists on their shoulders. It might have taken thirty days to do the round trip from Hartford to Wells River, Vermont, a distance of four hundred miles.

The pole men were laborers whose work made 'more use of the Hand and the Body than of the Mind'. The labor force in the colonies during the seven-
teenth century (in Connecticut anyway) certainly didn't have a surplus of artisans, and probably had more farmers than any other group. In 1770 eighty per cent of the male labor force was engaged in farming, while only eighteen per cent were artisans of some sort. The apprenticeship system in England bound the servants for seven years, which was far worse than the comparable situation in America. Young men in America were apprenticed usually for four or five years, or until they ran away like Ben Franklin. Also there was more hope for occupational mobility in America. A man who began as a housewright could practice his skills and maybe end up as a joiner—his son might become a cabinet-maker (Thernstrom's Poverty and Progress). Early towns recognized the importance of having skilled artisans in their community, which could mean more prosperity and more trade.

It was a common practice for the proprietors (the founders and governing body) of a town to seek craftsmen with certain skills to join the community. Typically they would offer a houselot and farmland to induce certain artisans to settle there. Gristmills became a crucial facet and measure of a town's prosperity. The communities life was focused around the mill and often the townships undertook the cost of a mills construction to encourage millers to settle in the area. Many of the communities along the Connecticut River banks practiced such methods to help their towns and industries grow.

In 1740 an ambitious farmer named Thomas Buck erected a sawmill in what became to be known Bucktown, a rural community west of Portland, near the junction of New Drain (Reservoir Brook) and Wilcox Hill Road. That same year he sold a partial interest to Jama Wilcox, another early settler and farmer from Bucktown. The mill was located on Wilcox land, so Buck probably had leased or purchased the site from Wilcox. The landscape surrounding Reservoir Brook was well suited for dam and mill construction. There was a steep drop with high banks, and a narrow river bed which all help make reconstruction less burdensome should the dam be washed a way during the spring floods.
Buck and Wilcox were farmers who had other interests, like lumbering, and pursued this occupation during the off season. This diversity in occupation was a fairly significant and generally accepted aspect of life in eighteenth century Connecticut. It is believed that lumber from this particular mill was shipped to places like Glastonbury, Middletown and Wethersfield because the remaining houses of that period weren’t built with milled lumber—most of the timbers were still hewn. Around 1790 two other sawmills began operating about a mile west of the Buck mill, evidence that the timber line was moving inland. After 1799 Buck’s mill was the major supplier of boat timber for the Churchill Shipyard in Portland. But Thomas Buck was more than a simple farmer and mill owner; he pursued other occupations like inventing and patenting farm related implements and more notably, carriage making.

Buck’s sons Samuel, Thomas and Barnard were all old enough by 1818 to help their father run the farm and mill. At this time Thomas Buck employed a blacksmith and owned a casting shop where iron was molded and shaped for his carriages. Though the sons learned their fathers trades, not all of them stayed in Bucktown. Several moved to North Carolina where they attempted, without great success, to set up the carriage making business. It is curious to speculate whether or not this was a conscious effort to establish a production market base. Eventually Buck grew entirely away from operating the sawmill for two reasons, 1) the competition he got from the Gildersleeve sawmills made it less profitable for him, and 2) the forests surrounding his sawmill were pretty much depleted. Buck was a kind of entrepreneur, a man who could anticipate change yet still develop a variety of ambitions. Such a man was more likely to succeed in early nineteenth century Connecticut.

Another such entrepreneur in the Connecticut valley was Jesse Hurd (b. 1765) of Middle Haddam. Jesse was the son of Jacob, an eminent and early ship captain of the area. Jesse Hurd went to sea at the age of fourteen. Drusilla Dart became his bride in 1788 and thereafter he pursued a
career as a sea captain, who by 1790 owned several vessels. There were at least ten merchants investing in ships in the Middle Haddam area during the period 1797-1805, one of which was Hurd. The master carpenter of the Hurd yard was Thomas Child. He was the son of James Child, a shipbuilder from Warren, Rhode Island. Two of his sons, Thomas and Kelly, learned this same trade, and Thomas eventually trained the third brother Gardner, in the same field. The Child family was certainly responsible for the success that the Hurd shipyard experienced, but craftsmen were only part of the large endeavor of building a ship. Money was needed to finance supplies for construction, and such large sums usually had to come from city merchants.

Jesse Hurd was most successful because of his direct associations with New York City merchant houses. Nathaniel and George Griswold were the first of six prominent New England firms that helped establish New York as a port, and by 1803 they began appearing as partners with Hurd in the ownership of four vessels. Between 1806-1810 they had a share in half the boats built in Middle Haddam, and between 1811-15 their investments increased to two-thirds of the total number of ships built. Hurd then, was most important as a mediator between Middle Haddam and New York, and acted as the coordinator in stages of production at the shipyard.

Hurd’s shipyard was quite extensive, it employed many people and produced quite a few large ships. Two sizes of ships were in demand at the time. Sloops and schooners (100-200 tons) were used in the coasting and West Indies trade and could navigate up the river fully loaded. Brigs and ships (200-400 tons) were created for ocean travel and would never return to Connecticut again after they were sold. At the yard there was a sawpit, a steambox, a ropewalk 'many rods long'; in 1829 Thaddeus Tibbals mechanized oakum for caulking; Hurd owned two blacksmith shops; he had a man named William Nott who made most of the blocks and pulleys; John W. Johnson operated the sail loft which employed four women, and area farmers were quite good about saving valuable 'neec's' and selling them to Hurd's yard. It
was indeed a community effort, but not in the purest sense of the term. Hurd relied heavily on imports, especially from New York, to keep the level of production high.

Most of the metal products, especially iron, came from New York. Many of the tools and supplies came from New York too, like augers, spikes, nails, glass, turpentine and yellow paint. Typically ships were painted bright colors at the beginning of the nineteenth century, though by 1850 black was more popular. Besides tools and supplies to keep his labor force productive, Hurd, like all the shipbuilders, invested in rum. It was considered a necessary staple by the workers, who drank twenty-four gallons during six months of construction. Naturally, most of the men who did the heavy labor, like the sawyers, teamsters and carpenters, drank the most rum. Hurd employed ten men for general labor, and countless other skilled craftsmen were required for precise sawing, joining, trunneling, making fittings and caulking and painting.

In one particular survey of a large ship being built on the Connecticut River, fifty-seven people were involved. Of those fifty-seven, twenty-five of them were bringing in supplies, most obviously lumber. The rest of the laborers can be broken down into three main divisions, 1) ship carpenters, 2) joiners, and 3) caulkers. The carpenters main job was to frame up the boat; in large ships frames were sawn rather than steam bent. Carpenters built the stocks and determined where they should be placed so that launching was as easy as possible. They also had to plank the hull, usually using good, native white oak. Carpenters did some sawing but mostly did a lot of adze work fairing up the frames so that the planks would lie flush. Carpenters got about four shillings a day. Joiners were supposed to finish off all the interior work of the ship. Some ships called for a good deal of elaboration, with raised panels and fancy moldings, and the joiners skill was worth about seven shillings a day. An Essex joiner named Josiah Gladding
nurtured several apprentices and was able to basically be his own boss. His sons and apprentices traveled to the local yards as a unit, independent of the rest of the yard workers, and commanded high prices for their services. When not working on vessels this group built furniture, a community house, a meeting house, and a school house. Gladding is one more example of the diverse, economically independent successful entrepreneurs. Finally the ship caulkers were responsible for making the ship tight by driving oakum and cotton in between the plank seams. It was considered to be the most highly skilled job-caulkers received eight or nine shillings a day. Sawyers, those members who made this whole process possible, only got twenty dollars a month. Interestingly enough though, Hurd paid most of his workers in notes redeemable at his own dry goods store. The more he traded with New York, the more vast became his business connections and trade options for shipbuilding tools and store provisions.

The last ship built at Hurd’s yard was the ‘Logan’ (1832) which proved too massive to navigate the goals at Saybrook and had to be buoyed up by a flotation device of empty barrels. It must have been a fairly ornate ship because the cabin interior was finished off with mahogany boards. The shipbuilding industry significantly dropped after 1835, partly because the New York shipyards developed a more advanced technology and Connecticut yards couldn’t compete anymore. Jesse Hurd died in 1831, a transitional time when local laborers were making a shift from riverport to mill seats. Industry and small scale manufacturing were taking the place of shipbuilding. Some of Hurd’s relatives continued building ships but eventually stopped, and Middle Haddam turned into a kind of summer resort for sea captains.

Another interesting yet smaller shipyard in Middletown (Cromwell) was run by a Captain Abijah Savage (b. Middletown Upper Houses, July 2, 1744). He was the son of Joseph Savage, a master mariner supposedly killed by his crew in a mutiny at sea. Abijah’s credentials are a good deal better. He was a member of Benedict Arnold’s Quebec expedition and was taken pri-
soner and held for fourteen months. He returned to the Upper Houses after his release and apparently continued to build ships. He, being captain of a regiment, kept a company book during the war, but apparently kept using it for his own credits and debts after the war. The gridwork indicating soldier's supplies was disregarded; he simply wrote right across it. Most entries were for some kind of lumber transaction, usually somebody was cutting and delivering it for him. Most interesting of all entries was a credit in July 1801 for drawing two loads of timber both from Alsop's and Hubbard's woodlots. This was proof that real estate was a good investment, and that timber resources were scarce. Those who had anticipated this could now begin to benefit. There were many credits to Asa Boardman, Samuel Wilcox and John Wilcox for 'giting timber'. The most common woods were white and red oak, pine and occasionally walnut. In 1796 Savage made an entry for a 'walnut stick for a keal 56 foot long' and '1 plank log 52 feet'. It is sad to think that the timber resource has dwindled that much, but it would probably be very difficult to find timbers of that size in the Connecticut forests today.

About twenty vessels in all came from this shipyard, which equaled a rate of one large ship per year. Savage's son, Abijah Jr., was probably second in command and the rest of the labor force was made up of outsiders - people who didn't remain in the yard for more than a year. Savage was not just a humble, small time boatbuilder, he was an informal merchant who shared the profits from his ships and argos. Many of his contracts were settled in merchandise, and he often paid his workmen in commodities. He had a West Indies business on the side, selling rum, sugar and salt. Savage got most of his timber from Zacchariah Stow and the rest from local farmers, an indication that it too was a kind of community effort.

General Comfort Sage and Company was a Middletown based privateering operation. Sage and Savage were part owners of most ships that Savage built,
which helps explain his (Savage's) side business selling West Indies goods. Privateering could be quite lucrative, sometimes as much as one hundred thousand dollars was earned by one vessel. The rewards were usually divided accordingly: six parts to the captain, four to the first mate, two to the second mate and one to each of the crew members; the owners got the same share as the captain and crew. So Savage was one more relatively successful small time entrepreneur, whose ambitions were more easily satisfied than say, a Gildersleeve or Hurd's.

Transactions weren't as easy as they may seem to have been—it doesn't seem as though Americans were really comfortable with currency even after the Revolution because many merchants still bartered with commodities. People didn't always pay back loans and money values weren't consistent everywhere. Uriah Hayden built the warship the 'Oliver Cromwell' in 1776 and hadn't been paid by the colony in 1779. He said he prayed for repayment of the money he had advanced and 'the rum he had loaned'. Moses Bush, a shipwright from Chatham, spent four years building the 'Boubon' and got three thousand dollars in Continental securities, which he called an 'inadequate reward'. He was forced to mortgage his farm and he wanted the Assembly to make adequate payment for the ship. In a letter to William Bull, a shipbuilder, Perry Walter expressed his rejection of Bull's proposed price for a ship:

...we are very much disappointed at the price you name for a vessel built as we want and are very sorry that we could not have agreed. There don't appear to be no chance for us to agree with your price being so much more than any vessel of that size is worth or cost. One of my nabors built a sloop for his own use she is called the ...of Fairfield completely furnished also as good timber and plank as ever was, well ironed, every trunnel wedged inside the sealing, elegant accomodations, painted through out and is 100 tons, large stout rigging and labor for $3600.—besides labored under all possible disadvantages compared to those who practis building, in fact I do believe that I could have built the same size equally good for some hundred dollars less for he boarded all the people out at 2 dollas a piece, besides all this he did not purchase articles to the best advantage and further did not lift his finger to do any thing himself and even half or three quarters of the time was no where near
the yard. So that I am confident from past experience that your price is such as will and cannot be accepted to if I was ever to pay... I should want all white oak bottom.

So shipbuilders even in the early 1800s had to compete and meet the demands of the growing economy. They weren't great American heroes who 'rode in' and banged together boats— they had to be established and settled, and depended on many other industries to be successful. The economy was fairly complex and shipbuilding had to satisfy more than the needs of fishermen. Merchants now required ships to trade in a world economy that encompassed the European powers across the Atlantic Ocean and island nations in the Caribbean Sea.

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OTHER SOURCES

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Bill Rich's paper on Middle Haddam
-all of the above can be found at The Greater Middletown Preservation Trust, Middletown Connecticut.

a lecture by John Coff, Brown University graduate, primarily concerned with the lives of shipyard workers in the Connecticut River valley, Griswold Inn December 8, 1980, 8 p.m.