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Wheels, Looms, and the Gender Division of Labor in Eighteenth-Century New England

Laurel Thatcher Ulrich

ON December 15, 1792, Ruth Henshaw of Leicester, Massachusetts, wrote in her diary, "This day I am 20 years of age. Spun 3 skains lining [linen]. Wove 3 yards all wool."¹ That combination of tasks would have astonished her ancestors. In seventeenth-century New England, as in most textile-producing areas of the Atlantic world, women spun, but they did not weave. In Europe, men dominated weaving until the end of the eighteenth century, when mechanized spinning and expanding outwork loosened gender barriers. The transition was far from universal. In western France, in some English woollen districts, and in cotton coverlet-weaving sections of Lancashire, men held on to their looms into the nineteenth century. Weaving remained so much a part of the male domain in Pennsylvania that an illustrated children's encyclopedia published in 1837 still showed a male weaver beside a female spinner.² Henshaw's peculiar combination of labor requires explanation.

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¹ Diary of Ruth Henshaw Bascom, in Ruth Henshaw Bascom Papers, 1789–1848, American Antiquarian Society, Worcester, Mass., microfilm edition, *American Women's Diaries: New England: From the Collection of the American Antiquarian Society* (New Canaan, Conn., 1983), reel 1.

² Adrienne D. Hood, "The Gender Division of Labor in the Production of Textiles in Eighteenth-Century, Rural Pennsylvania (Rethinking the New England Model)," *Journal of Social History*, 27 (1994), 551; Gay L. Gullickson, *Spinners and Weavers of Auffy: Rural Industry and the Sexual Division of Labor in a French Village, 1750–1850* (Cambridge, 1986); Maxine Berg, *The Age of Manufactures: Industry, Innovation, and Work in Britain, 1700–1820* (New York, 1986), 215–28, 254–60; Duncan Bythell, *The Handloom Weavers: A Study in the English Cotton Industry during the Industrial Revolution* (Cambridge, 1969), 62, 65, 131–33; Adrian Randall, *Before the Luddites: Custom, Community, and Machinery in the English Woollen Industry, 1776–1809* (Cambridge, 1991), 13–21; Jane Gray, "Gender and Uneven Working-Class Formation in the

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Diaries like Henshaw's once fit comfortably into historians' accounts of preindustrial New England. Nearly everybody believed, as the general public still does, that household production was ubiquitous and textiles the universal work of women. In the past fifteen years, early Americanists have demolished the notion of self-sufficiency but have given uneven attention to gender. In an important article published in 1982, Carole Shammas assailed the common assumption that farms produced all their food and clothing. The "average American spent over one quarter of his or her budget on imports," she wrote. Though early American housewives may have done some spinning, knitting, or weaving, they were incapable of providing all the textiles their families required; at one point, the colonies "imported annually enough men's worsted stockings from England to put a pair on every adult male in America."³

"Having liberated ourselves from the myth of self-sufficiency," Timothy Breen wrote in 1986, "we can return with fresh appreciation to the world of consumption."⁴ Women in Breen's account appear primarily as consumers, recipients of purchases made possible by male labor in fields and at sea. Breen argues that in the 1740s, in response to a dazzling new array of consumer items, colonial Americans rushed to produce more "tobacco, rice, indigo, wheat, fish, tar—indeed, anything that would supply the income necessary to purchase additional imports." Until mounting debts exposed their dependence on Britain, colonists welcomed the new consumerism. "Not only did the market provide them with goods that they could not produce themselves, but it also freed them—especially the women—from the backbreaking toil connected with subsistence."⁵

Writing in 1994, Gloria Main also pointed to a new era beginning in the mid-eighteenth century. For her, the important change was not the availability of imported goods but the capacity of women to pay for them through participation in an expanding wage economy. She posited a four-stage development. In the earliest settlements, the need to establish farms kept New England women "outdoors working alongside men." By the late seventeenth century, housewives were becoming more domestic, "brewing beer, baking

Irish Linen Industry," in *Gender and Class in Modern Europe*, ed. Laura L. Frader and Sonya O. Rose (Ithaca and London, 1996), 37–56; Tessie P. Liu, *The Weaver's Knot: The Contradictions of Class Struggle and Family Solidarity in Western France, 1750–1914* (Ithaca, 1994), 234–49; Olwen Hufton, *The Prospect before Her: A History of Women in Western Europe*, Volume One: 1500–1800 (New York, 1996), 16, 78–79, 160, 165–66; Edward Hazen, *The Panorama of Professions and Trades*, 2 vols. (Philadelphia, 1837), 42. Some scholars argue that, until the commercialization of production in the Middle Ages, women were responsible for all phases of textile production, including weaving. See Elizabeth Wayland Barber, *Women's Work: The First 20,000 Years* (New York, 1994), and David Herlihy, *Medieval Households* (Cambridge, Mass., 1985), 39, 52, 58, 67, 101, and *Opera Muliebricia: Women and Work in Medieval Europe* (New York, 1991).

³ Carole Shammas, "How Self-Sufficient Was Early America?" *Journal of Interdisciplinary History*, 13 (1982), 247–72.

⁴ Breen, "An Empire of Goods: The Anglicization of Colonial America, 1690–1776," *Journal of British Studies*, 25 (1986), 485.

⁵ *Ibid.*, 487, 485. See also Breen, "'Baubles of Britain': The American and Consumer Revolutions of the Eighteenth Century," *Past and Present*, No. 119 (1988), 73–104.

bread, churning butter, making cheese, spinning yarn, and knitting stockings and mittens." In the third period, beginning about 1715, the "demand for unskilled labor declined relative to skilled labor," encouraging "both men and women to specialize and invest more time in nonfarm occupations." After 1739, "wars and their aftermaths" created "sudden demands for men and provisions" and put "large amounts of money into circulation." The result was a long period of rising wages that put pressure on the gender division of labor. The Seven Years' War "accelerated economic change, bringing more women into the paid labor force and expanding the penetration of the market into the rural interior. . . . When combined with evidence that increasing numbers of country girls were attending school and learning how to write, the growing ability of women to earn money and conduct business at the local store can be viewed as a positive good, giving them greater control over their own lives."⁶

My own early work contributed to this devaluing of domestic production. The colonial revival emphasis on household manufacturing, I argued, obscured other important elements of female life. In *Good Wives*, published the same year as Shammass's article, I suggested abandoning the spinning wheel as an "icon of women's history." That I have spent the last seven years counting wheels and looms can be attributed to my encounter with the diary of Martha Moore Ballard.⁷ Although Ballard purchased goods at the store, collected fees for her midwifery services, and made daily use of her ability to write, she and her daughters were far more involved in textile production than the women I wrote about in *Good Wives*. Ballard kept close watch on her daughters' weaving and nursed her sheep as tenderly as her neighbors. She did not describe a world in which large numbers of women worked for wages. Was the difference in the sources or in the economy? Was Ballard's labor an artifact of the frontier or of rural poverty? Had the Revolution not only changed the meaning of women's work but altered the work itself? If the diary had opened in Massachusetts in the early eighteenth century instead of Maine in 1785, would textile manufacturing have had so large a place in it? I could not answer such questions because no detailed study of household production had appeared since Rolla Milton Tryon's 1917 dissertation. Adrienne Hood's meticulous investigation of eighteenth-century Chester County, Pennsylvania, found no female weavers.⁸ If New England was different, how and when did it become so?

⁶ Main, "Gender, Work, and Wages in Colonial New England," *William and Mary Quarterly*, 3d Ser. 51 (1994), 62–63, 65.

⁷ Laurel Thatcher Ulrich, *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650–1750* (New York, 1980), 34; Ulrich, *A Midwife's Tale: The Life of Martha Ballard Based on Her Diary, 1785–1812* (New York, 1991).

⁸ Tryon, *Household Manufactures in the United States, 1640–1860* (New York, 1966; orig. pub. 1917); Hood, "Gender Division of Labor," and "The Material World of Cloth: Production and Use in Eighteenth-Century Rural Pennsylvania," *WMQ*, 3d Ser., 53 (1996), 43–66. Early essays urging attention to the subject include James Henretta, "The War for Independence and American Economic Development," and Jacob M. Price, "Reflections on the Economy of Revolutionary America," in Ronald Hoffman et al., *The Economy of Early America: The Revolutionary Period, 1763–1790* (Charlottesville, Va., 1988), 59, 309. Shammass, *The Pre-Industrial Consumer in England and America* (Oxford, 1990), 61, notices the growth in domestic manufacturing in America but downplays it.

The answer can be found in probate inventories. Once one knows what to look for, the evidence is unmistakable. In the first half of the eighteenth century, New Englanders reorganized household production, creating the gender division of labor familiar from later diaries. Long before the Revolution and more than half a century before the opening of the first mechanized spinning factories, New England women began to weave. By the time the first rural women began to keep diaries, in the 1770s, New England's distinctive household production system was fully in place. Female weaving was neither an artifact of rural poverty nor a response to frontier exigency. It was a colonial adaptation to an expanding mercantile economy, a gendered variant of the intensification of labor other historians have written about.

The shift from male to female weavers was not just an exchange of one group of workers for another but a transformation in the nature of production. Seventeenth-century weavers had been apprentice-trained village specialists; eighteenth-century weavers were dutiful daughters and industrious wives scattered among dozens of rural households. Inheriting some but not all the tools of their predecessors, they borrowed implements, traded labor, and adapted production standards to household need. Although a few earned cash for their work, far more spent their days as Ruth Henshaw did—spinning and weaving for family use. Female-managed household production continued into the early nineteenth century, as little-known manuscript data from the federal manufacturing census of 1810 demonstrate.

Historians are right to argue that colonial households failed to produce all the cloth they needed. For most, that was never the goal. A relatively small investment in equipment allowed families to make use of bits and pieces of time, educate their daughters in habits of industry, and produce useful materials that might otherwise drain credit at the store. Consumption and production grew together in the eighteenth century. John J. McCusker and Russell R. Menard have noted that if “imports from Great Britain had expanded as fast as the economy grew after 1700, the colonists would have consumed about 12 percent more British imports in 1770 than they did.” For New England, the discrepancy may be even greater. Between 1720 and 1774, per capita exports from Britain to New England grew by only 25 percent, while those to the Middle Atlantic more than doubled.⁹ Household production surely accounts for part of this difference. In western Massachusetts, Connecticut, and New Hampshire, from 65 to 80 percent of households had spinning wheels by 1750. By the eve of the Revolution, even in coastal Massachusetts, more than half of probated households owned wheels (Figure I).

To comprehend New England's textile transition, however, one must probe beneath the surface of such evidence and look for social relationships as well as process. Only close attention to the details of cloth making can

⁹ McCusker and Menard, *The Economy of British America, 1607–1789* (Chapel Hill, 1985, 1991), 96–97, 279–86, 296, quotation on 281. Although the authors caution that changes in the coastwise trade may have affected these numbers, they believe that consumption really did increase faster in the Middle Atlantic.

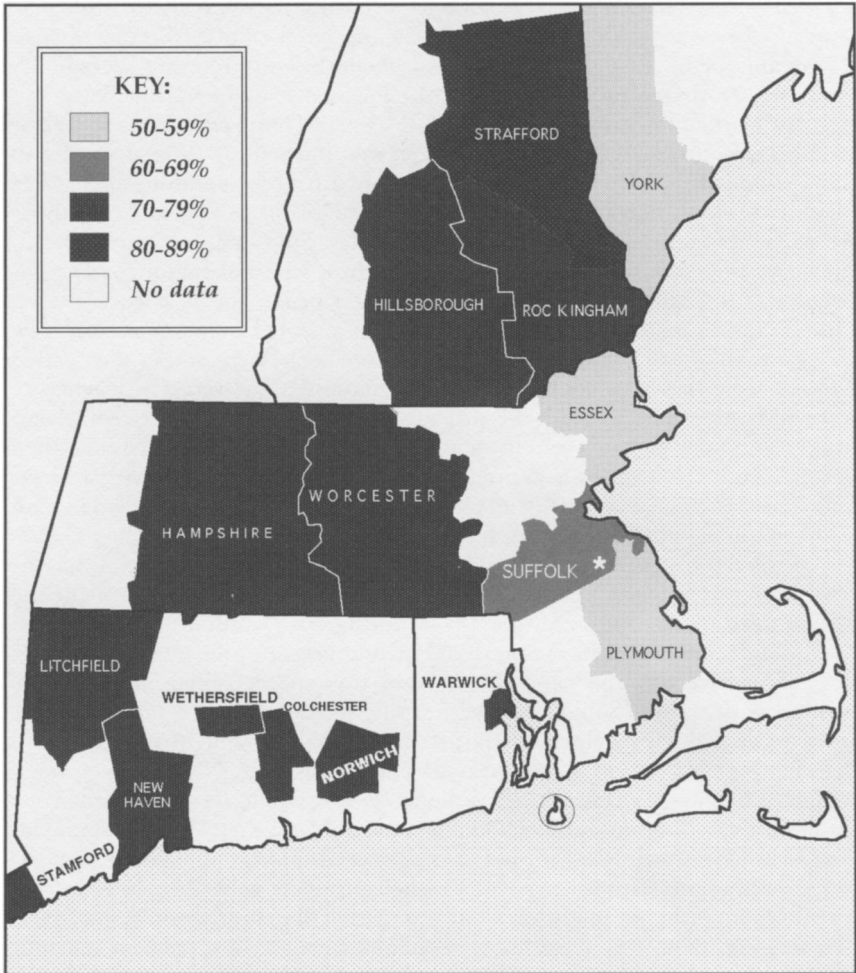


FIGURE I

Spinning Wheels in New England Probate Inventories, excluding Boston, circa 1774. Sources: see Appendix.

explain why Henshaw on her twentieth birthday spun three skeins linen and wove three yards wool. This article begins with eighteenth-century probate inventories, proceeds to a discussion of diaries such as Henshaw's, and ends with an examination of little-known evidence from the manufacturing census of 1810. Part of a larger study of New England's much-celebrated but little understood "age of homespun," it offers new ways of looking at familiar sources.

Cloth begins with fiber. When New England diarists wrote of “picking” cotton, they were referring to the tedious process of ridding the raw fiber of leaves and seeds. (The cotton itself was brought by ship from the West Indies and later from the southern mainland.) Flax, sown in the field like grain, yielded hairlike linen (often spelled “lining” as in Henshaw’s diary) as well as stubby tow. From sheep, spinners processed both short-fibered wool and long-stranded worsted. Preparing the various fibers for spinning demanded distinct tools and techniques. Workers “carded” wool and cotton, “combed” worsted, “broke,” “hackled,” or “hetcheled” flax. Spinning, too, was differentiated by fiber. Most rural families owned a great wheel or standing wheel for wool and a smaller foot wheel, operated by a pedal, for worsted and flax, though the design of the wheels and their names varied from one part of New England to another. In Connecticut, flax wheels were sometimes called “Dutch wheels”; in Essex County, Massachusetts, they were “Irish wheels.” Nor did spinning complete the process. Some yarns required twisting and doubling. Yarn of every variety had to be wound and measured and then knotted into skeins or runs, a process more easily accomplished with a hand-cranked clock reel than with the clever but less convenient niddy-noddy, an I-shaped stick with twisted ends for holding coiled yarn.¹⁰

Probate inventories frequently list looms (often spelled “lums” or “loombs”) with their “gear and tackling,” the latter a catchall term for the assemblage of auxiliary equipment—warping bars, quill wheels, temples, reeds, and sleys—used in the best-equipped houses. In preparation for weaving, looms were warped and drawn, and tiny spools called “quills” were wound with thread. Sometimes the warping process required that thread be sized or coated with a gluelike mixture that made the fragile threads easier to handle. Nor did spinning and weaving end the process. Newly woven linen required bucking and bleaching, while wool, if it was to be used for blankets or clothing, was often dyed at home or by a clothier, then shrunk, pounded, and brushed into finished form at a commercial fulling mill. Probate inventories reflect home production in finished products as well as in fiber and yarn. One household might own yarn for a coverlet, another only the coverlet, making it impossible to know what was woven at home, what sent out to an artisan weaver, what imported from England. Letters, account books, and diaries make clear, however, that ordinary household looms produced huckaback, overshot, twill, diaper, dimity, fustian, jeans, shirting, wale, and many kinds of patterned coverlets as well as the all-purpose fabrics identified as “homade” or homespun.

At the base of all these processes was a fundamental relationship between spinning and weaving. The two activities so casually linked in Henshaw’s diary were actually very different. Spinning was a tactile craft, time-consuming but easy to pick up and put down. Weaving was both

¹⁰ This paragraph and the one that follows are based on my work with New England probate records and diaries. For a brief description of some of the processes and helpful photographs and drawings see [Martha Coons], *All Sorts of Good Sufficient Cloth: Linen-Making in New England, 1640–1860* (North Andover, Mass., 1980), 33–63.

mathematical and mechanical, an “art, skill, and mystery” long transmitted through apprenticeship. In textile-producing areas of Europe, eight to ten spinners kept one weaver supplied with thread. Shammass omitted loom ownership from her final tables on English probate records because the numbers were so small. “Only a tiny percentage of inventories listed looms, and the possessors were almost always identified as weavers or clothiers.” The exceptions occur in commercial cloth-producing areas, where whole towns might specialize in weaving yarn produced elsewhere.¹¹

In an artisan system, where families carried their homespun wool and flax to a local weaver, one would expect to find many more households with wheels than with looms, and that is exactly what one discovers in early American inventories. In Essex County, Massachusetts, almost half the households had spinning wheels in 1700, but only 6 percent had looms. In Chester County, Pennsylvania, similar ratios persisted into the nineteenth century, the number of households with looms never passing 10 percent. During the first half of the eighteenth century, however, a strikingly different pattern developed in New England. In Essex County, loom ownership tripled between 1700 and 1750, while wheel ownership stayed about the same. In Hampshire County, Massachusetts, the shift occurred even earlier. Between the end of King Philip’s War and the beginning of the eighteenth century, loom ownership increased tenfold while wheel ownership merely doubled (Figure II).

Dividing the number of households with looms by the number of those with wheels produces ratios that allow for easy comparison. Figure III shows both the spread of loom owning in Hampshire and Essex Counties in the early eighteenth century and the high proportion of looms nearly everywhere by 1750. Only Wethersfield and (for the 1770s) Stamford, Connecticut, deviate from the norm.¹² The graph also shows local variations. The highest ratios were in Plymouth and York Counties, Massachusetts, and in New Hampshire, areas that combined hardscrabble agriculture with fishing or lumbering. In the 1750s, 56 percent of Plymouth County estates listed wheels and 33 percent had looms, producing an astonishing loom-to-wheel ratio of 0.58. The markedly lower ratios for Hampshire County in the 1750s represented a decline from the 1730s, perhaps because the number of spin-

¹¹ Hufton, *Prospect before Her*, 90, 93; Shammass, *Pre-Industrial Consumer in England and America*, 24–27 (quotation), 32.

¹² Jackson Turner Main, *Society and Economy in Colonial Connecticut* (Princeton, 1985), 131, 133. My probate sample for Wethersfield came from files in the Webb-Deane-Stevens Museum, Wethersfield. I do not yet know how representative Wethersfield was of the area around Hartford. Edward S. Cooke, *Making Furniture in Preindustrial America: The Social Economy of Newtown and Woodbury, Connecticut* (Baltimore, 1996), has shown how varied contiguous towns can be. The organization of probate courts also created differences in the data. Massachusetts’s records are organized by county, Connecticut’s by district, and Rhode Island’s by town. Until 1774, New Hampshire’s were colonywide. The variety in Connecticut samples may reflect, therefore, smaller numbers that allowed greater contrast between towns. Wethersfield and Colchester, Conn., are contiguous districts, for example, that have very different agricultural bases, with Wethersfield profiting from both the better soil and easier transportation of the Connecticut River valley.

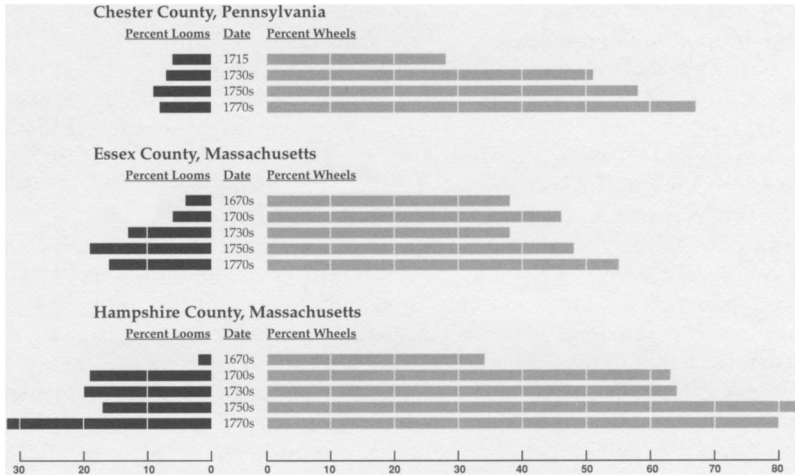


FIGURE II

Percent of Wheels and of Looms in Probate Inventories. Source: see Appendix.

ning households expanded faster than new weavers could be recruited. By 1774, Hampshire, too, had one weaving household for every 2.5 households with wheels, producing a loom-to-wheel ratio of 0.40, almost identical to that for rural Suffolk County and for Warwick, Rhode Island.¹³

How could so few spinners keep so many weavers busy? If this were the West of England or the linen precincts of Ulster, one would suspect that yarn was being gathered from miles around by merchant clothiers. But New England in the middle of the eighteenth century had no regional markets in yarn or cloth, and its very few clothiers were fullers and dressers of finished cloth, not agents for commercial production. Here, a high proportion of looms to wheels meant dispersed household production. Work that had once belonged to male artisans had become a part-time occupation for women and girls. The account book of John Gould of Topsfield, Massachusetts, gives us some sense of how this happened. Gould was a master weaver, the descendant of English weavers who came to Ipswich in 1640, but in the early eighteenth century he was unable to pass the craft on to his sons. His account book notes the employment of only two journeymen or apprentices between 1697 and 1724. Neither stayed long. Random entries suggest that his

¹³ The appendix gives complete data, including numbers for the 1790s, for a wide range of places, including one district in Vermont. With the exception of Stamford, Conn., which looked like the rest of New England in the 1790s, there was no change. The availability of factory-spun cotton and the growth of outwork weaving in the early 19th century increased loom-to-wheel ratios. According to Jonathan Prude, *The Coming of Industrial Order: Town and Factory Life in Rural Massachusetts, 1810–1860* (Cambridge, 1983), 279 n. 17, more than 60% of households in Worcester County had looms in the period 1790–1840. See also the discussion of the 1810 census below.

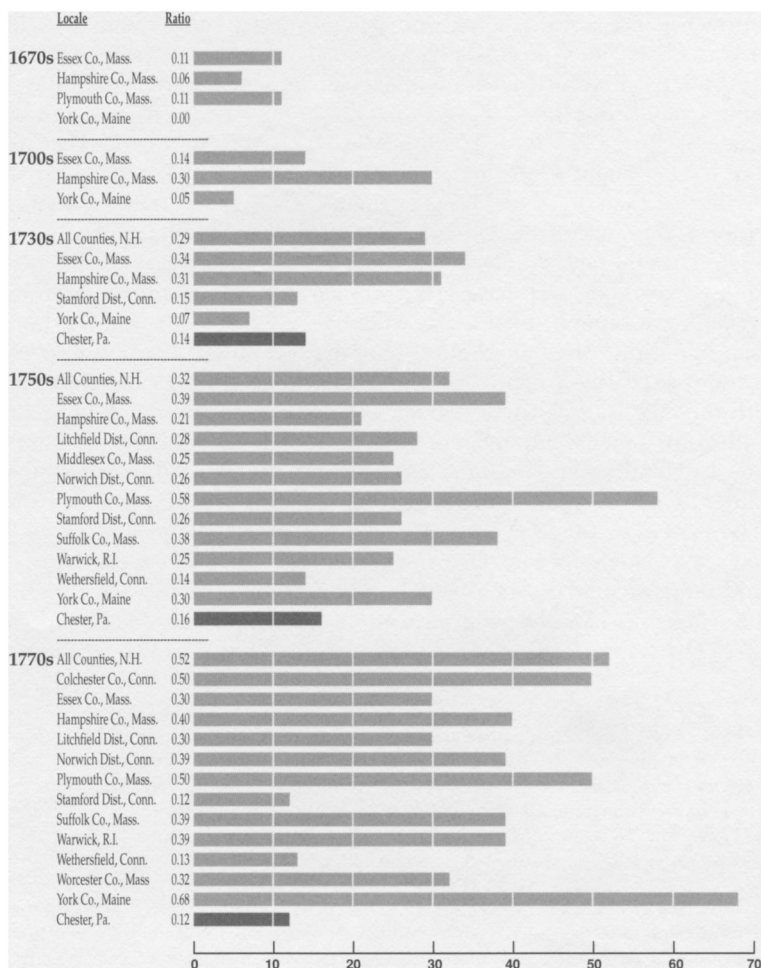


FIGURE III

Ratio of Looms to Wheels in Probate Inventories. Source: see Appendix.

steadiest helper was his daughter Mary, who at age twelve spent “a fortnight” weaving a coverlet. Later entries mention a daughter Phebe and two nieces.¹⁴

The wives and daughters of weavers had probably always done some work at the loom, but that practice accelerated in the early eighteenth century. In March 1737, the Reverend Matthias Plant of Newbury, Massachusetts, “paid to the Ilseys young women fifty shillings for weaving forty yards of woosted

¹⁴ Benno M. Forman, “The Account Book of John Gould, Weaver, of Topsfield, Massachusetts: 1697–1724,” *Essex Institute Historical Collections*, 105 (1969), 36, 39; John Gould Account Books, 1697–1723, 91, 93, Essex Institute, Salem, Mass.

at fifteen pence pr yd." These young women were presumably daughters of Jonathan Ilsey, identified as a Newbury weaver when his estate was probated in 1753.¹⁵ By midcentury, weaving had spread beyond artisan families. Many sources mention female weavers by the 1750s. By 1773, even the wealthy Elizabeth Porter Phelps of Hadley, Massachusetts, could write that her husband had "brought a Girl here for a Weaver."¹⁶

Notice that the transition to female weaving occurred in Main's third period, a time when the demand for skilled labor was purportedly rising. If female weavers had simply taken the place of male weavers, this period of rising wages might well have given women new opportunities in an expanding market economy. Instead, as weaving passed into the female domain, it disappeared into the household, becoming less rather than more specialized. I cannot yet fully account for this transition, although it surely involved both the fragility of artisan weaving as a male occupation and limited opportunities for female employment in an undeveloped colonial economy. The New England story is almost exactly the reverse of the situation in the Choletais in western France in the nineteenth century, where handloom weaving was so much a part of male identity that fathers were willing to send their daughters into factories rather than abandon their dying craft.¹⁷ New England had no factories in the eighteenth century, and for men landownership had always been a more important source of identity than craft. Nor was there a continuous pool of immigrant weavers, as in

¹⁵ Entry for Mar. 16, 1736/7, *Diary of the Reverend Matthias Plant*, Newbury, Mass., typescript, Essex Institute; Jonathan Ilsey Estate, Essex County Probate Records, 14459, cited in Mohanty, "Unnoticed Craftsmen Noted: Commercial Handloom Weavers and Weaving in Essex County, Massachusetts, 1690–1790," typescript, chart 1. Other references to female textile workers in Plant's memoranda include July 9, 1739, "paid Mrs Brown for my wifes stuff wove at Wenham"; Mar. 18, 1736/7, "Then I payd Mr James wife for ye abovsd forty yards for pressing it, at two pence halpeny a yard."

¹⁶ "The Diary of Elizabeth (Porter) Phelps," ed. Thomas Eliot Andrews, *New England Historical and Genealogical Register*, 118 (1964), 123. The original diary, owned by the Porter-Phelps-Huntington Association, is at the Amherst College Library, Amherst, Mass. In her study of account books, Gloria Main found scattered references to female weavers as early as 1708; Main, "Gender, Work, and Wages," 61. Table V giving comparative wages for male and female weavers should be used with caution because most account books seldom credit female workers separately. A credit for weaving under the name of a male household head may or may not reflect male work. This may explain the convergence Main finds in payments to male and female weavers. The two exceptions to female anonymity are widows and single women living away from their families. Other early references to female weavers can be found in Nicholas Perryman Ledger, Exeter, N. H., 1723–1754, New Hampshire Historical Society, Concord, 1, 46, and in Samuel Lane, *A Journal for the Years 1739–1803*, ed. Charles Lane Hanson (Concord, N. H., 1937), 41. Jerry Brown, who is editing Lane's account books, has found many references to female weavers in the 1740s and 1750s. *The Diary of Matthew Patten of Bedford, N. H.* (Concord, N. H., 1903), includes references to both male and female weavers in the 1750s and 1760s. In the course of research on an unrelated topic, Cornelia Hughes Dayton found and passed on to me the inventory of Mary Dean, "late of Sudbury, Weaver," Middlesex County Probate File No. 6130, Massachusetts State Archives. It included "Loom and Gears, and old Lumber in the West end of the House," valued at 1/10/0.

¹⁷ Liu, *Weaver's Knot*, 234–49.

Pennsylvania, to renew a fading European system.¹⁸ By midcentury, New England's artisan weavers were caught between two powerful competitors—commercial producers in Europe who were turning out better and cheaper cloth (partly through technical innovation and partly through the use of out-workers) and women who worked in the anonymity of the household production system.

Some men continued to weave, but the proportion of male artisans declined as household weaving expanded. Gail Mohanty has identified eighty-three self-described male weavers in Essex County probate records between 1691 and 1820. She found exactly the same number in 1790—five—as in 1700. Although her samples for midcentury yielded from ten to fifteen weavers each, the numbers are trivial compared to population growth in the county and to the proliferation of looms in the same period.¹⁹ In my own Essex County sample for 1748–1750, only one of nine households with a loom was headed by a man identified as a weaver. In 1774, the figure was one in eighteen. Only two other weavers appeared in my other New England probate samples, one in Suffolk County, Massachusetts, the other in York. Both men were poor and landless. Neither had a loom. Yet in the same inventories, equipment for weaving was found in the households of men identified as coopers, joiners, shoemakers, mariners, blacksmiths, esquires, reverends, captains, and farmers. This was so even for the Scots-Irish settlements of southern New Hampshire, where immigrant weavers attempted to establish a commercial linen industry in the 1730s.²⁰ Connecticut's occupational tax list of 1798 lists thirty-nine weavers. Significantly, thirty-seven of these were from the southwestern part of Fairfield County, near the New York border, an area that included the probate district of Stamford with its uncharacteristic loom-to-wheel ratios. If male artisans were still active in other parts of Connecticut, they were not producing enough cloth to merit notice.²¹

¹⁸ Breen and Stephen Foster, "Moving to the New World: The Character of Early Massachusetts Immigration," *WMQ*, 3d Ser., 30 (1973), 189–222; Virginia DeJohn Anderson, *New England's Generation: The Great Migration and the Formation of Society and Culture in the Seventeenth Century* (New York, 1991) 137–40; J. T. Main, *Society and Economy*, 243–44; Hood, "Domestic Cloth Production" and "Organization and Extent of Textile Manufacture in Eighteenth-Century Rural Pennsylvania: A Case Study of Chester County" (Ph. D. diss., University of California, San Diego, 1988), 15–48; Lucy Simler, "Tenancy in Colonial Pennsylvania: The Case of Chester County," *WMQ*, 3d Ser. 43 (1986), 542–69.

¹⁹ Mohanty, "Unnoticed Craftsmen Noted."

²⁰ My students Edith Murphy and Beth Nichols found only 7 weavers, all male, in 748 published New Hampshire wills, 1642–1751. Donna-Belle Garvin, *N. H. Hist. Soc.*, shared with me notes on weaving from her unpublished file of New Hampshire craftsmen. She found 26 names of weavers, 25 of whom were male, before 1770. Of these, 11, including the only female, were from the Scots-Irish town of Londonderry. Garvin has found no male weavers after 1770. I have found evidence of only 3 male weavers in 351 probated estates, 1769–1789, none after 1776.

²¹ Connecticut Valuations Lists, 1798, Connecticut Historical Society, Hartford. The small number of weavers stands out among the hundreds of artisans listed in the card index to the tax assessments. My own Connecticut research is not far enough along yet to explain the difference in Fairfield County. The spinning factory opened in Boston in 1751 was supervised by an immigrant male weaver. The factory failed, Gary Nash has argued in "The Failure of Female Factory Labor in Colonial Boston," *Labor History*, 20 (1979), 165–88, because Boston's poor wid-

In her study of changes in the organization of brewing in medieval and early modern England, Judith M. Bennett argues that what characterizes women's work over time is not the tasks they perform but the marginality of their work in relation to that of men. "In 1300 many villages boasted numerous female brewers who supplemented their households' income by selling ale to friends and neighbors; in 1700, those same villages often hosted only a handful of male brewers." What had changed was not the status of women but the status of brewing. As regional and national markets developed, men took over the craft, concentrating production in the hands of fewer master brewers. By 1700, "the brewing industry had developed beyond the realm of women's work."²² In both cases, dispersed production meant female production, though in New England the classic story of economic development was reversed.²³

To say that female work was grounded in the household is not to say that it was disconnected from the larger Atlantic economy. Jan de Vries calls attention to ways in which economic change in Europe in this same period was driven by "reallocations of the productive resources of households." In some areas, putting-out industries captured underused child and female labor, simultaneously creating new goods and new markets for those goods, but in other places, farmers and their sons concentrated on market agriculture, while children and women produced less salable commodities for family use. In either case, the result was an "industrious revolution" that helped to transform the western world.²⁴ Historians of colonial America have not given enough attention to ways in which market production helped to shape household behavior—and vice versa.

Elizabeth Mancke's study of rural store accounts in eighteenth-century Nova Scotia is a beginning. Although men in this northern timber economy ostensibly paid for women's purchases at the store "by raising corn and wheat, cutting clapboards and shingles, making wheelbarrows, and butchering livestock," very few of the goods families bought could be used without further processing. If "men produced to consume," Mancke argues, "women consumed to produce."²⁵ Records that focus on direct exchanges of mar-

ows refused to come into the factory to spin. The costs of purchasing flax, constructing looms, bleaching and dying cloth, and paying the male weaver ten times the wages of spinners probably also contributed to its demise; "A Table for Regulating Spinners," Ezekiel Price Papers, Massachusetts Historical Society, Boston.

²² Bennett, "Medieval Women, Modern Women: Across the Great Divide," in *Feminists Revision History*, ed. Ann-Louise Shapiro (New Brunswick, N. J., 1994), 58–59.

²³ Comparative evidence for the argument that dispersed weaving is female weaving comes from D. T. Ruddel's unpublished study of the gender division of labor in Quebec (National Museum, Ottawa). Little weaving was done in the early stages of settlement, but by the 1790s, "31% of farming families in the Quebec City area owned looms, reaching a high of 47% in the second decade of the nineteenth century." In newer and less prosperous areas of the province, household weaving persisted until the end of the 19th century.

²⁴ De Vries, "Between Purchasing Power and the World of Goods: Understanding the Household Economy in Early Modern Europe," in John Brewer and Roy Porter, eds., *Consumption and the World of Goods* (London and New York, 1993), 107, 108.

²⁵ Mancke, "At the Counter of the General Store: Women and the Economy in Eighteenth-Century Horton, Nova Scotia," in Margaret Conrad, ed., *Intimate Relations: Family and Community in Planter Nova Scotia, 1759–1800* (Fredericton, N. B., 1995), 170, 171 (quotations).

ketable goods—tea kettles for lumber, sugar for hides—obscure the multiple ways in which the hidden labor of the household made those exchanges possible, not only by maintaining workers and by transforming purchased goods into usable products but also by producing items that allowed families to substitute one kind of import for another. This intersection of production and consumption is strikingly visible in New England diaries. On a day when Henshaw and her sisters were busy weaving woolen shirting, their parents returned from Boston bringing “fabric for gowns” and “fashionable hats, purple satten lined with straw color.” The shirting the girls were weaving helped to pay for the satin, though it never appeared in the credit column under their father’s name at the store.²⁶

Breen’s notion that the availability of store goods relieved colonial women “from the backbreaking toil connected with subsistence” exaggerates the liberating power of teapots and calico because it fails to consider ways in which market production was in large part a creation of household labor. Main’s argument about the place of women in an expanding wage economy also looks different when we add household manufacturing to the story. Her study of New England account books does indeed show an increase in the number of references to female laborers—from 3.8 percent in the period before 1674 to 11.4 percent in the 1765–1774 period, yet what is striking is how few female names appear in either period. Even at the end of the colonial era, nearly nine of ten entries were for male workers.²⁷ If this trickle of female names is seen as a visible manifestation of a larger transformation—a subtle shifting of responsibility in households, the numbers appear more significant. Daniel Vickers has argued that for men in Essex County, Massachusetts, “the tight generational interdependency that had once served the purposes of frontier development began to relax as the local economy matured.” As fathers became unable to employ all their sons in clearing land and building farms, they encouraged temporary engagement in crafts such as shoemaking, joinery, and coopering.²⁸ Female weaving was part of this transformation, but, because the workers were daughters rather than sons, it took different form.

In families where field labor for women was thought unseemly and wage labor a sign of declining fortunes, household manufacturing allowed men to employ their girls without appearing to do so. Samuel Lane, a wealthy and taciturn tanner of Stratham, New Hampshire, documented this strategy when he added to a collection of memorable events at the end of his diary:

²⁶ Entry for June 6, 1797, Diary of Ruth Henshaw Bascom.

²⁷ G. Main, “Gender, Work, and Wages.”

²⁸ Vickers, *Farmers and Fishermen: Two Centuries of Work in Essex County, Massachusetts, 1630–1830* (Chapel Hill, 1994), 247–59, quotation on 258. Other studies that emphasize economic diversification include Christopher M. Jedrey, *The World of John Cleaveland: Family and Community in Eighteenth-Century New England* (New York, 1979); Edward S. Cooke, Jr., “The Social Economy of the Preindustrial Joiner in Western Connecticut, 1750–1800,” in *American Furniture, 1995*, ed. Luke Beckerdite and William N. Hosley (Hanover, N. H., 1995), 113–44; and in greater detail Cooke, *Making Furniture in Preindustrial America*.

"May 1770. my Daughters Learned to Weave." Lane had reason to mark the occasion. In 1762, he had spent £1,298 (old tenor) to outfit his oldest daughter for marriage. Textiles accounted for 42 percent of that expenditure. Six black chairs cost less than two bed blankets. When Lane's younger daughters married, their own home-woven textiles replaced many of the store-bought fabrics their sister had received. Significantly, Lane assigned the store-bought fabrics and the home-produced goods identical value, the women's labor belonging not so much to themselves as to the household.²⁹ Yet the act of weaving made a daughter's work visible in the textiles she produced. A girl who could weave as well as spin no longer had to rely on her father to settle accounts with an artisan weaver or a village storekeeper, though she also had less claim on her father's resources. In either case, the locus of responsibility had shifted ever so subtly from collective to individual enterprise.

Shammas calls attention to the exaggerations in a widely circulated (and perhaps apocryphal) story published in the 1780s about a farm family that went to ruin when the daughters began to purchase rather than spin their own trousseaus.³⁰ This predictable piece of republican propaganda may not describe actual behavior, but it surely identifies an important source of tension in rural households. Less studied than land transfers from fathers to sons, daughters' portions were a great drain on family resources. Homespun towels and aprons not only freed cash for calico; they made daughters more self-supporting. The diary of Matthew Patten of Bedford, New Hampshire, helps us to see this process at work. When their daughters were small, the Pattens had carried yarn to both male and female weavers; now another strategy became more attractive. Patten went into the woods in the summer of 1768 and "hewed a poplar tree for a Cloath and yearn beam for our loom." Constructing the loom took time: "I made 4 single pullys for to weave our fustine and Hannah McFarland and susey put it in the loom" on May 2, 1770. Thereafter, most weaving entries refer to Susey or, more fondly, "our Susey." Patten's oldest daughter was then eighteen years old. By 1771, the father was reserving a certain spot of ground "for susannas flax seed."³¹ Though Patten owned both the ground where Susanna sowed her flax and the cloth it provided, her labor marked it as her own.

In some households, daughters achieved almost total control of their own earnings in the years before marriage. Abigail Fearing began to enter credits in a small book in the 1760s, noting debts due for weaving checked shirting, drugget, worsted, "plain cloth," camblet, toweling, cotton and linen, cotton and tow, and "yard wide Linning and tow." Hannah Matthews's account book from the 1790s was more ambitious, reflecting perhaps the better education she had received. Recording debits on the left and

²⁹ Lane, *Journal for the Years 1739–1803*, ed. Hanson, 41.

³⁰ Shammas, "How Self-Sufficient Was Early America?" 246–48; Jane C. Nylander, *Our Own Snug Fireside: Images of the New England Home, 1760–1860* (New York, 1993), 170.

³¹ Entries for July 19, 1768, May 2, 1770, May 13, 1771, *Diary of Matthew Patten*, 219, 244, 266. For other references to Patten's construction and maintenance of the loom see 212, 213, 227, 228, 234.

credits on the right, she balanced her own labor in spinning, weaving, and combing worsted with corn, flax, mutton, hogs' lard, and occasional cash received from both male and female neighbors. Above the alphabetical index to her homemade book she wrote, "The Property of Hannah Matthews Yarmouth June the 11th 1790." These records document the opportunity some women had to reap cash income in the years before marriage and the economic self-consciousness that may have accompanied it, but they also show the continuing power of coverture. It was probably Fearing's husband who, shortly after their marriage, turned the book over and began a different set of records in which he listed debits and credits for "English hay," hemlock timber, and "oald Ceder Poasts us hoald." Matthews's records also diminished after marriage, stopping completely by 1799.³²

Daily diaries offer a more complex picture of the role of textile production in female work and exchange. Among the eighteenth-century rural diaries I have examined, only that of Mary Cooper of Oyster Bay, Long Island, fails to mention female weavers. The diaries of Ruth Henshaw, Sarah Bryant, and Martha Ballard are the most extensive, although the terse and pious diary of Elizabeth Porter Phelps also helps show that spinning and weaving occurred even in wealthy Connecticut Valley households. The shorter records of Abigail and Elizabeth Foote, Eliza Wildes, Sarah Weeks, and Elizabeth Fuller offer vivid accounts of textile work, as does the diary of New Hampshire handyman and farmer Abner Sanger. Supplemented by fragmentary records in other collections of family papers, such sources help us to see the everyday consequences of New England's curious combination of looms and wheels.

Ruth Henshaw noted that a Mrs. Wheeler came to her house "in forenoon to warp web," adding "I went up there PM to weave out her peace [piece]." At first glance, such an exchange suggests the joke about the two friends who earned money by taking in each other's laundry, but the relationship between the two women was more complex than it appears. Wheeler was not doing the weaving but the warping, the difficult preliminary threading of the loom. Once that task was done, a less-skilled person could throw the shuttle, as Ruth did a few hours later with a different web of cloth already set up at the Wheeler house.³³ The same process was at work in Cummington, Massachusetts, when Sarah Bryant "warpt a piece for Mrs. Snell" and in Hallowell, Maine, when Merriam Pollard came to the Ballards' house "to instruct Dolly about her weaving." Neighborhood exchanges between skilled weavers and their neighbors were essential in a production system without apprenticeship.³⁴

³² Account books of Abigail and John Fearing, Spaulding-Fearing Papers, 1747–1929, Mass. Hist. Soc.; Hannah Matthews Book, 1790–1813, Henry Francis DuPont Winterthur Museum and Library, Wilmington, Del.

³³ Entry for Apr. 12, 1790, Diary of Ruth Henshaw Bascom. There are two ways of reading diary entries that refer to "warping" at a neighbor's house. Because of the context, I have assumed that in this case Mrs. Wheeler was helping Henshaw set up her own weaving. In other cases, a woman might have borrowed a neighbor's warping bars to prepare a web for her own loom. See Nylander, *Our Own Snug Fireside*, 177.

³⁴ Entries for May 1, Sept. 11, 1788, July 15, 1791, Diary of Martha Moore Ballard, vol. 1, Maine State Library, Augusta; entry for May 26, 1810, Sarah Snell Bryant Diary, Houghton

Reciprocal exchanges filled a somewhat different purpose. "Spun and sang songs," Henshaw recorded on December 23, 1789, two days after her friend Sally arrived to help with the spinning. Later, Ruth would go to Sally's house to repay the favor. Exchanging labor (in New England parlance, "changing works") relieved the tedium of repetitive tasks such as carding or spinning. The diaries of Abigail and Elizabeth Foote of Colchester, Connecticut, are filled with such exchanges. "At night I went to Mr. Otis's to work & they ow'd me 2 Run of Linnen towards changing works," Elizabeth wrote on April 30, 1775. "They" were the Otis daughters—Prudence, Mercy, and Sarah. Although houses belonged to fathers, these young women balanced their own labor accounts. Between the first of June and the end of October, the Foote sisters worked for or exchanged labor with more than fifteen families. On July 10, 1775, for example, Abigail Foote "beamed" a piece of cloth and "drawed it through the harness," while Mercy Otis "handed ends." Three days later, Abigail returned the favor, going to the Otis house to card tow.³⁵

Household weavers also exchanged tools. Dispersed production encouraged the egalitarian symmetry reflected in the diary of Abner Sanger of Dublin, New Hampshire: "I go to Daniel Gleason's, get my wife's weaving sley and said Gleason's wife's harness to weave with."³⁶ The sley and the harness were detachable implements used to adapt a loom for weaving different kinds of fabric.³⁷ Pennsylvania's artisan weavers sometimes owned as many as sixteen sleys in different sizes. An occasional New England inventory mentions five; most had only two or three, which is why Martha Ballard borrowed a "40 sleigh of the widdow Coburn" to weave one kind of cloth and a "64 twenty slay" from Merriam Pollard to weave another.³⁸ Flax combs or hackles (usually called "hetchels" in New England dialect) also came in varied sizes. "I hetchel'd 43 lbs & 1/2 of flax & then went after the fine hachel to Mr Otis's," Elizabeth Foote wrote on April 10, 1775. Probate inventories listing "half a hetchell" or "half a dye pot" formalized joint use of implements that, like the baby in Solomon's court, could not be divided.³⁹

Library, Harvard University. Hufton notes the existence of similar networks among female spriggers and lacemakers in Britain, in *Prospect before Her*, 169.

³⁵ Diaries of Elizabeth Foote and Abigail Foote, Foote-Brainard Papers, Conn. Hist. Soc. In the early 19th century, some single women began to open their own store accounts, but most work was still listed under the name of the (usually male) head of household. See Thomas Dublin, *Transforming Women's Work: New England Lives in the Industrial Revolution* (Ithaca, 1994), 41–43.

³⁶ *Very Poor and of a Lo Make: The Journal of Abner Sanger*, ed. Lois K. Stabler (Portsmouth, N. H., 1986), 500.

³⁷ Plain "tabby" (over-under) required two harnesses; patterned linens or twill required 4. Sleys, which were equipped with fine slats made of wire or reed, varied according to the number of threads in a given piece of cloth. For sheeting, Sarah Weeks used a "2 and forty harness," and, even with the help of her 9-year-old son, it took her all day Saturday and into Sunday to finish drawing the fine warp through the reed; Sarah Weeks Sheldon, *Loose Journal*, May 1832, Weeks Family Papers, Sheldon Museum, Middlebury, Vt.

³⁸ Entries for Apr. 20, 1790, Oct. 15, 1792, *Diary of Martha Moore Ballard*, vol. 1. Henshaw's mother bought a "two and thirty slay of a pedlar"; entry for Oct. 10, 1792, *Diary of Ruth Henshaw Bascom*.

³⁹ Entries for Mar. 9, Apr. 10, Oct. 23, 1775, Elizabeth Foote Diary.

The diaries tell us little about women whose poverty or behavior set them outside the circle of neighborly exchange. In the early years of her diary, Elizabeth Porter Phelps noted that her mother had taken in a young woman pregnant out of wedlock, planning to “set her spinning for her a week or two she not expecting to lie in this three months.” Unfortunately, the woman delivered that very night. Less benign was an encounter between one of Phelps’s neighbors and a servant who “was brought to own that she wilfully set his house on fire . . . in order to burn some yarn that she had been discovered to make false ties in.”⁴⁰ One wonders what sort of relation between mistress and maid led to that conflagration. Presumably, the fire was quenched before any real damage was done.

In most diaries, the worker is her own most demanding mistress. There were surely practical reasons for Martha Ballard’s careful accounting of beans planted, cabbages harvested, and skeins of yarn added to a web—constructing a record of her work gave her a blueprint for next year’s gardening or weaving—but when she wrote that she had twisted eighteen knots of thread or that her daughter Hannah had taken four coverlets out of the loom, she also affirmed her identity as an industrious wife. The least expressive of New England diaries reflect this concern with productivity. When Eliza Wildes wrote, “I fixt my Cap and made some minxpye and wove some,” or Sarah Bryant hastily scrawled, “spun a mop warpt a piece,” they defined their lives through labor. Sarah Weeks did the same when she reduced a week in February 1805 to a bare list: “Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, 20 run linnen.”⁴¹ These diarists measured their days, not in coffee spoons, but in knots and skeins.

Stephen Innes has described an ethic of productivity in seventeenth-century New England “that enjoined men and women to labor incessantly with their hands as well as their wits.” Because there are so few female sources from the early colonial period, it is impossible to know whether this habit of measuring work was a Puritan inheritance or part of a larger consumption-driven and politically reinforced shift toward rationalized production. Probably it was both. A close analysis of pre-Revolutionary newspaper accounts shows that even at the height of the consumer boycotts, women’s spinning meetings had as much to do with supporting the ministry and providing relief to the poor as with politics. Yet continuing public attention surely heightened the meanings of domestic production. The two “spinning frolics” Ruth Henshaw attended in the autumn of 1789 may have been spontaneous gatherings like the wool breaks, twisting parties, and quilting bees that also enliven her diary, but when she and her friends “with 30 other

⁴⁰ Entries for Feb. 15, 1767, Sept. 11, 1768, “Diary of Elizabeth (Porter) Phelps,” ed. Andrews, 15, 22. Like other wealthy New England families, the Porters (and later the Phelpses) owned slaves, although their hired spinners and weavers all seem to have been from local families. Wound yarn was measured by placing “ties” or knots at set intervals.

⁴¹ Entries for Aug. 21, 1786, July 30, 1791, *Diary of Martha Moore Ballard*, vol. 1; entry for Oct. 31, 1789, *Diary of Elizabeth (Eliza) Perkins Wildes Bourne*, Maine Historical Society, Portland; entry for Aug. 16, 1810, *Sarah Snell Bryant Diary*; entry for Feb. 1805, *Sarah Weeks Sheldon, Loose Journal*.

ladies made Mrs Morse a visit & presented her with about 130 Skns yarns of our own manufacture," they were engaged in a more formal act. Although Henshaw's entry makes no mention of politics, it lists the number of participants, the precise quantity of yarn produced, and the formal presentation to Mrs. Morse in language very close to newspaper stories.⁴²

Early nineteenth-century newspapers continued to report feats of household manufacture as a new series of political crises culminating in the War of 1812 gave renewed import to local production. A Hallowell, Maine, paper reported in the autumn of 1810 that two Massachusetts women had in fifteen hours spun "38 skeins of excellent woollen yarn of seven knots of forty threads each," outdoing the record of a New York woman whose activities had been reported in an earlier edition. Two weeks later, an "Eye Witness" from Winthrop, Maine, responded that another pair of spinners in his neighborhood had "upon trial of their skill," produced "forty skeins and twenty threads in sixteen hours and fifteen minutes, which they spun reeled, and put up in order, all with their own hands," adding that "the fair daughters of Maine are behind none in point of dexterity and industry." Martha Ballard's comment that her daughter Dolly had "spun 34 notts of Linning yarn this day" shows the difference between newsworthy and normal household production, but it also shows how public rhetoric built on the private practice of counting knots and skeins.⁴³

Not that all women relished the endless work of carding, combing, spinning, reeling, doubling, dyeing, bleaching, spooling, warping, and weaving. "I spun," Elizabeth Fuller wrote on February 8, 1792; "I should think I might have spun up all the Swingling tow in America by this time." On another day, she celebrated taking the last of her cloth out of the loom by mocking the political rhetoric of the day, "Welcome sweet Liberty, once more to me. How have I longed to meet again with thee."⁴⁴ Elizabeth Foote also alluded to politics when she noted, shortly after the outbreak of the Revolution, that a hired spinner named Alice Welch had spun two knots "& felt Nationaly into the bargain." Since on a good day Alice was capable of producing thirty knots or more, Foote's comment was sardonic. The next day, however, Elizabeth confronted her own as well as Alice's shortcomings:

⁴² Stephen Innes, *Creating the Commonwealth: The Economic Culture of Puritan New England* (New York, 1995), 12–13; entries for Sept. 15, Oct. 6, 1789, Sept. 27, 1807, Diary of Ruth Henshaw Bascom. Spinning frolics occurred before the war and continued long after; *The Diary of Mary Cooper: Life on a Long Island Farm, 1768–1773* (New York, 1981), 8, 44, 48; Mary Beth Norton, *Liberty's Daughters: The Revolutionary Experience of American Women, 1750–1800* (Boston, 1980), 169, 219; Ulrich, "Daughters of Zion: Religious Women in Revolutionary New England," in Ronald Hoffman and Peter Albert, eds., *Women in the Age of the American Revolution* (Charlottesville, Va, 1989); Christopher Clark, *The Roots of Rural Capitalism: Western Massachusetts, 1780–1860* (Ithaca, 1990), 141.

⁴³ *American Advocate*, Oct. 11, 24, 1810; entry for July 30, 1791, Diary of Martha Moore Ballard, vol. 1. At 7 knots per skein, Dolly made less than 1/8 of the yarn produced in Winthrop, but neither did she spin for 15 hours at a stretch, having other household duties in the course of her day. Ballard accentuated Dolly's achievement by writing it in the margin of her daily entry.

⁴⁴ "Diary Kept by Elizabeth Fuller, Daughter of Rev. Timothy Fuller of Princeton," in Francis Everett Blake, *History of the Town of Princeton . . .* (Princeton, Mass., 1915), 1:313, 315.

"I lay abed till sun an hour high. Got up and carded a little while & then Writ Journal for 5 week back & Alice went home Sick after she had spun 4 knots. Procrastination is surely the Thief of Time."⁴⁵ For Elizabeth Foote, recording work was as much a duty as doing it.

Such habits persisted into the nineteenth century. Late in life, Lucy Meserve Smith, a Bethel, Maine, woman who emigrated to Utah with the Mormons, recalled the spinning bee she organized in the Rocky Mountains in the 1840s. She and three other women carried their wheels to an empty room in the schoolhouse "and tride our best to see who could real off[f] the greatest No. of knots from sunrise to sunset." One woman spun more than 100 knots, but another, who had not quite so many, "had a better twist on hers. . . . On the whole we concluded we all beat." In an economy in which everyone "beat," there was little opportunity for virtuoso production but ample room to display the virtues of dexterity and industry. Smith concluded her memoir with a long list of the cotton, flax, tow, and wool she had spun; the yarn she had dyed; the dresses, cloaks, coats, pants, and aprons she had sewn; the diaper, jeans, kersey, flannel, linsey, and coverlets she had woven; the palm leaf and straw hats she had braided; the quilts she had made; the stockings, socks, and mittens she had knitted ("nearly enough to fill a barrel"), and the rags she had cut, torn, sewn, and woven into carpets, adding wryly that she had also taken "a few lessons in drawing and a few lessons in French."⁴⁶

Household production shaped female consciousness and reinforced habits of neighborly exchange. It also laid the groundwork for early industrialization. Writing from Philadelphia in November 1791, Connecticut Congressman James Hillhouse reported to his wife, "It is [a] matter of Curiosity here to know what progress and improvements are made in the Manufactures of our Country—and I have a Mind you should send a small piece of your homespun I believe it to be the best that has been made."⁴⁷ That a wife's homespun cloth should be a source of family pride is not surprising. That it should be a measure of the "progress and improvements" of American manufacturing is more significant, especially given well-publicized efforts to encourage commercial enterprise in this same period. In January 1790, George Washington addressed Congress in a "crow coloured suit of clothes" made at a commercial woolen manufactory in Hartford, Connecticut. The year before, he had visited a sail-cloth factory in Boston, perhaps the very same "carding & spinning & weaving manufactory" Ruth Henshaw observed there a few years later. Even with the president's encouragement, however, such establishments were short-lived, defeated not only by their inability to compete with renewed imports after the war but also by the impossibility of their developing markets for simpler fabrics as long as so much cloth was made at home.⁴⁸

⁴⁵ Entry for Oct. 23, 1775, Elizabeth Foote Diary.

⁴⁶ Lucy Meserve Smith Memoir, George Albert Smith Papers, Special Collections, University of Utah, Salt Lake City.

⁴⁷ James Hillhouse to Rebecca Hillhouse, Nov. 4, 1791, Hillhouse Family Papers, Sterling Library, Yale University. Karen Kauffman kindly supplied this reference.

⁴⁸ Entry for Nov. 1, 1793, Diary of Ruth Henshaw Bascom; William R. Bagnall, *The*

Congressmen Hillhouse's faith in his wife's homespun was well placed. The most successful early industries built on rather than competed with household manufacturing. Of the 19,276,043 yards of cloth made in New England in 1810 and recorded in the federal census of that year, only 4 percent was produced in "manufactories." The remaining 96 percent was woven "in families." Helping to sustain this household production was a host of water-powered carding and spinning mills. New England had 671 wool carding mills in 1810, one in almost every country town. Connecticut had a carding mill for every 1,424 persons in the state in 1810. Even Maine, which still had many backcountry settlements, listed one for every 3,049 persons. The 112 cotton-spinning mills in the region were concentrated in southeastern New England. Rhode Island, with only 5 percent of the region's population, had 25 percent of its spinning mills. Other spinning factories were clustered along rivers in Norfolk, Worcester, and Essex Counties in Massachusetts, with a few in southern New Hampshire and Maine. Although some factory-spun yarn was turned into fabric by contract weavers, most was eventually integrated into subsistence production.⁴⁹

Sarah Bryant began taking wool to a carding mill near her home in Berkshire County, Massachusetts, in 1810, listing small batches ranging from four to forty pounds in the inside cover of her diary for that year. Martha Ballard referred to the mill at Winthrop, Maine, as the "masheen," welcoming the labor it saved her in preparing wool for hand spinning. Toward the end of her life, she occasionally added "facktory filling yarn" or factory warp to the webs she sent her daughter for weaving.⁵⁰ One should not exaggerate the importance of industrial support, however. The principal fiber in Ballard's and Bryant's households, as in most, was neither machine-carded wool nor factory-spun cotton but flax, a plant grown and processed as in colonial times. Twenty years after the opening of the first water-powered spinning mills, wheels and looms remained a dominant feature of New England life.

Textile Industries of the United States (Cambridge, Mass., 1893), 112–17; David J. Jeremy, *Transatlantic Industrial Revolution: The Diffusion of Textile Technologies between Britain and America, 1790–1830s* (Cambridge, Mass., 1981), 10. A brief discussion and a picture of the cloth produced at Hartford appears in Nylander, "Textiles," in *The Great River: Art and Society of the Connecticut Valley, 1635–1820* (Hartford, Conn., 1985), 382, 383.

⁴⁹ "A Series of Tables of the Several Branches of American Manufacturers . . . for the Year 1810," in Tench Coxe, *A Statement of the Arts and Manufactures of the United States of America, For the Year 1810* (Philadelphia, 1814), 4–31. Unless otherwise indicated, all state and county computations discussed below are derived from data published in these pages. Useful summaries also appear in Tryon, *Household Manufactures in the United States*, 161–82. Some of Tryon's numbers are in error, however. A typographical or computation error adds an extra 1,000,000 to Rhode Island's total. Tryon also misinterpreted Maine's returns, lumping flax and mixed-fiber fabrics together in a catchall category mislabeled "Cotton." On the general limitations of the manufacturing data see Harold Hutcheson, *Tench Coxe: A Study in American Economic Development* (Baltimore, 1938). Because returns were uneven, the results are imperfect. Surviving manuscript schedules show both variations in recording practices and the seriousness of the effort.

⁵⁰ Ulrich, *Midwife's Tale*, 264, 402 n. 2; inside cover and entries for Feb. 14, 15, Mar. 27, 29, May 2, 11, 12, 1810 (on the continuing importance of flax), Sarah Snell Bryant Diary. See also Clark, *Roots of Rural Capitalism*, 15, 95–117, and Prude, *Coming of Industrial Order*, 43.

In 1814, Tench Coxe, the nation's most ardent lobbyist for just such an integration of industry and agriculture, published summary statistics from the 1810 census with an enthusiastic preface extolling the work of women. Praising the "sagacity and energy" that had given Rhode Island "the first comparative importance in cotton mills and establishments," he nevertheless noted the continuing importance of household production.⁵¹ The key to national productivity, he believed, was the proper employment of "the fair sex." Coxe did not discount the work of male artisans. The looms of Washington County, Pennsylvania, "are supposed to be worked by *male weavers regularly in the trade*." His italics suggest that he found such a situation unusual. Textile work not only contributed "to the comfort and happiness" of women but left men free "for the duties of the farm, and other employments, requiring exposure and strength."⁵²

The manufacturing data confirm Coxe's emphasis on dispersed household weaving. When his published totals for the various states are lined up according to the number of yards produced *per loom*, Pennsylvania stands at the top of the list, followed by Maryland, suggesting the persistence of artisan production in the Middle Atlantic. When the same list is rearranged to show *per capita* production, New Hampshire moves to the top, demonstrating the economic reality behind Coxe's faith in female production. New Hampshire's home weavers, working part-time with locally produced flax and wool and supplemented by a little factory-spun cotton, turned out twenty yards of fabric for every man, woman, and child in the state. County totals for other parts of New England show similar productivity in remote areas, very little household production near port cities, and a lot of variation in between (Figure IV).

Tiny Kent County, Rhode Island, produced a whopping seventy yards per family, almost all of it cotton (see Table I). Here the impact of industrialization was pronounced. As Mohanty explains, Rhode Island manufacturers sold factory-spun yarn and instructions for weaving to individual households, offering to buy back finished cloth. The impact on the state's manufacturing totals was appreciable. Rhode Island produced not only 94 percent of fabrics made in factories but also 55 percent of cotton cloth woven "in families." From the merchants' point of view, however, this loose form of outwork was never very successful. Rural families might return the cloth to the mill where they bought yarn or sell it elsewhere if the price was right, and the quality was frustratingly uneven. Such problems persisted into the next decade as merchants extended outwork to other states. In 1815, one Rhode Island merchant wrote in exasperation to a New Hampshire factor:

I did not expect but that your weavers would take from you such yarn as you had to put out. You will on a little reflection see, that if the

⁵¹ Coxe, *Statement of the Arts and Manufactures . . . for the Year 1810*, xiii (quotations), xv. Although he noted, xvi, that America still imported some flax from Russia, rural New Englanders clearly raised their own.

⁵² *Ibid.*, vii, xiv; Coxe, "Essay on the Manufacturing Interest of the U. S.," quoted in Jacob E. Cooke, *Tench Coxe and the Early Republic* (Chapel Hill, 1978), 492.

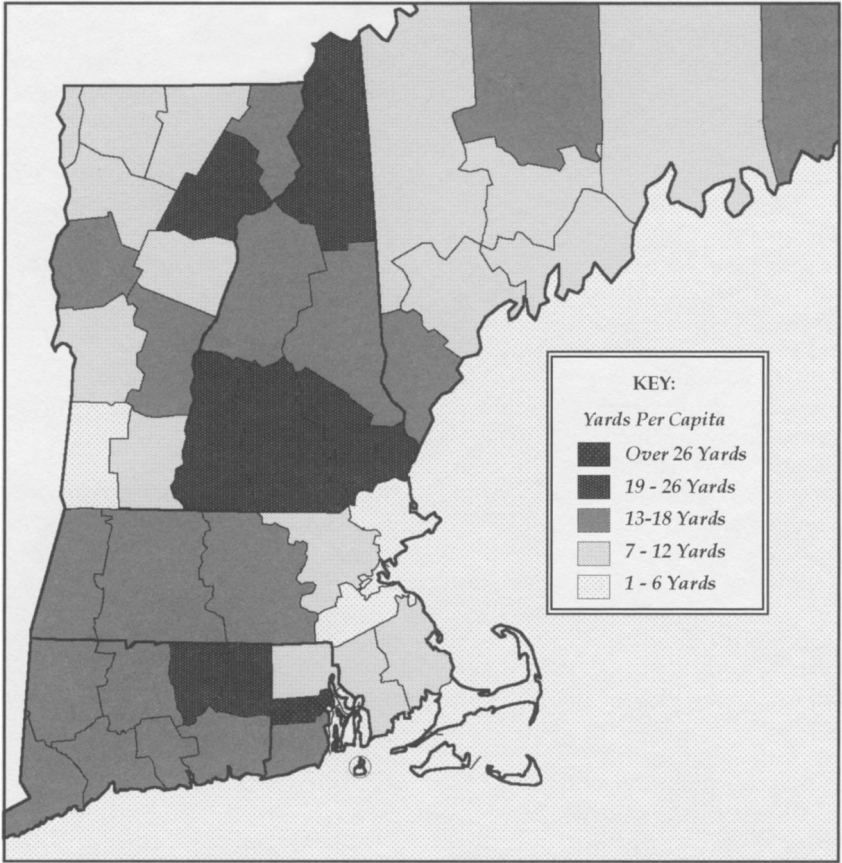


Figure IV

Cloth Production in New England, 1810. Source: Tench Coxe, "A Series of Tables of the Several Branches of American Manufacturers . . . of the Year 1810," in Coxe, *A Statement of the Arts and Manufactures of the United States of America for the Year 1810* (Philadelphia, 1814).

weavers are to weave just such kind of goods as they chuse and those only, that we are in but a sorry way, what advantage shall we derive from putting out yarn in large quantities, if it is to be selected by the weavers & that which they do not like is to be returned unwoven.⁵³

⁵³ Dublin, *Transforming Women's Work*, 33–40 (quotation); Mohanty, "Putting Up with Putting-Out: Power-Loom Diffusion and Outwork for Rhode Island Mills, 1821–1829," *Journal of the Early Republic*, 9 (1989), 191–216. For efforts to establish factories and employ artisan weavers see Mohanty, "Experimentation in Textile Technology, 1788–1790, and Its Impact on Handloom Weaving and Weavers in Rhode Island," *Technology and Culture*, 29 (1988), 1–31, and

TABLE I
TEXTILE PRODUCTION IN RHODE ISLAND COUNTIES, 1810

| <i>County</i> | <i>Population</i> | <i>Yards per Capita</i> | <i>Flax (%)</i> | <i>Wool (%)</i> | <i>Cotton (%)</i> | <i>Mixed (%)</i> |
|---------------|-------------------|-----------------------------|---------------------|---------------------|-----------------------|----------------------|
| Kent | 9,834 | 70 | 1 | 2 | 45 | 51 |
| Washington | 14,962 | 17 | 57 | 21 | 20 | 1 |
| Providence | 30,769 | 8 | 14 | 20 | 24 | 42 |
| Bristol | 5,072 | 6 | 11 | 17 | 72 | 0 |
| Newport | 16,294 | 5 | 42 | 21 | 14 | 22 |

The independence of New Hampshire weavers is explained in part by the continuing importance of homegrown flax and wool (see Table II). Because different states (and sometimes different counties) used inconsistent categories, it is difficult to know how much cotton may have been included under the label "mixed," but fabrics made entirely from cotton were obviously a very minor part of New Hampshire manufacturing. Town totals for Cheshire County show how important small carding mills and cloth-finishing establishments run by clothiers were to household production of wool (see Table III).

Although the mixture of fibers had changed since the colonial period, dispersed household weaving persisted. For most counties, aggregate data are all that survive, but for a few scattered locales house-by-house counts from the 1810 census also exist, making it possible to construct ratios of loom-owning families to cloth-making families similar to the loom-to-wheel ratios derived from eighteenth-century probate inventories. Figure V summarizes the results for eight towns in the northeast.⁵⁴ Only Elizabethtown, in upstate New York, shows any evidence of artisan weaving. The ratios for Huntington, Pennsylvania, look very much like New England's, a consequence no doubt of the peculiar history of this part of the Susquehanna Valley, which was settled in the 1780s by families from Connecticut. Remarkably, the census taker not only noted looms and yards per household but also designated the sex of weavers. Ninety-one percent were female.⁵⁵

Barbara M. Tucker, *Samuel Slater and the Origins of the American Textile Industry, 1790-1860* (Ithaca, 1984), 47-66.

⁵⁴ Manuscript census records, 1810, microfilm, M252, reels 12, 18, 27, 49, 64, 65, National Archives, Washington, D. C. I would like to thank Lois Thurston of Topsham, Me., for alerting me to the existence of manufacturing data in the population census for her town and Edward McCarron for tracking down those and other records at the Government Document Center, Waltham, Mass. For a list of extant manufacturing data see Preliminary Inventory 161, *Records of the Bureau of the Census* (Washington, D. C., 1964), Appendix 9, 132-34.

⁵⁵ The yards per capita were lower than New England, however, suggesting a less developed household production system. Population Schedules of the Third Census of the United States, 1810, M252, roll 49, Green, Indian, and Luzerne Counties, Pa. The census taker for

TABLE II
TEXTILE PRODUCTION IN NEW HAMPSHIRE COUNTIES, 1810

| <i>County</i> | <i>Population</i> | <i>Yards per Capita</i> | <i>Flax (%)</i> | <i>Wool (%)</i> | <i>Cotton (%)</i> | <i>Mixed (%)</i> |
|---------------|-------------------|-----------------------------|---------------------|---------------------|-----------------------|----------------------|
| Coos | 3,991 | 26 | 16 | 23 | 22 | 38 |
| Hillsborough | 49,149 | 24 | 44 | 21 | 19 | 16 |
| Rockingham | 50,175 | 23 | 53 | 10 | 16 | 21 |
| Cheshire | 40,988 | 20 | 27 | 30 | 6 | 37 |
| Strafford | 41,595 | 16 | 47 | 21 | 3 | 28 |
| Grafton | 28,462 | 14 | 38 | 33 | 5 | 24 |

Although it is impossible to know for certain how many weavers in other towns were female, linking demographic data with manufacturing data confirms the relationship between household production and the presence of daughters. In coastal Topsham, Maine, as well as Poultney and Northfield, Vermont, loom owners were distinguished from nonloom owners by household size. The additional female members in these families were not randomly distributed, however, but clustered in the ten-to-fifteen and sixteen-to-twenty age groups.

I have been able to link census data for Topsham with occupational information derived from deeds, probate records, and town histories, allowing an even closer look at cloth making in one New England town.⁵⁶ That the twenty-three Topsham families who made no cloth included two traders, a saddler, a potter, a pump and clock maker, and Benjamin Orr, Esquire, Counselor at Law, may lead one to conclude that artisan households or professional families made little cloth. But weaving families showed just as wide a range of occupations. In addition to forty-five yeoman, they included ten mariners, three housewrights, four blacksmiths, three shipwrights, two tanners, a joiner, a mason, a millman, five "gentlemen," three men called "Esquire," and a man identified in local records as a clothier, though his

Huntington District was Silas Jackson, one of the Connecticut petitioners who struggled for years with competing land claims by Pennsylvania speculators. See *The Susquehanna Company Papers*, vol. II, ed. Robert J. Taylor (Ithaca, 1971), 237.

⁵⁶ This paragraph and the one that follows are based on linkages between the Topsham, Me., census of 1810 and research by Edward McCarron in Lincoln County, Me., probate records and in George Augustus Wheeler, *History of Brunswick, Topsham, and Harpswell, Maine: including the Ancient Territory Known as Pejepscoot*, new ed. (Bowie, Md., 1989), and *Vital Records of Topsham, Maine, to the Year 1892*, ed. Mary Pelham Hill (Concord, N. H., 1929-1930). Probate records for the period 1800-1815 show 56% of households with wheels and 37% with looms. In the census, as we have seen, 88% of households claimed to have made cloth and 56% owned looms. Yet the ratio of loom-owning to wheel-owning households in the inventories (0.66) is almost identical to that for loom-owning and cloth-making households in the census (0.63), arguing for the accuracy of probate in revealing the structure of production.

TABLE III
TEXTILE PRODUCTION IN CHESHIRE COUNTIES, 1810

| <i>Town</i> | <i>Yards per Capita</i> | <i>Flax (%)</i> | <i>Wool (%)</i> | <i>Cotton (%)</i> | <i>Mixed (%)</i> |
|-----------------|-----------------------------|---------------------|---------------------|-----------------------|----------------------|
| Acworth*+ | 23 | 49 | 27 | 8 | 16 |
| Alstead*+ | 22 | 53 | 30 | 5 | 13 |
| Chesterfield*++ | 14 | 49 | 34 | 12 | 5 |
| Dublin*+ | 25 | 43 | 32 | 10 | 16 |
| Fitzwilliam*+ | 18 | 39 | 27 | 12 | 22 |
| Hinsdale+ | 14 | 58 | 26 | 7 | 10 |
| Jaffrey*+ | 19 | 40 | 28 | 7 | 24 |
| Keene*+ | 15 | 46 | 28 | 13 | 12 |
| Marlborough++ | 21 | 47 | 31 | 5 | 17 |
| Richmond | 18 | 48 | 30 | 12 | 10 |
| Ringe*+ | 22 | 36 | 27 | 12 | 25 |
| Sullivan | 27 | 48 | 27 | 11 | 14 |
| Surry*+ | 19 | 48 | 32 | 5 | 15 |
| Swanzey*+ | 24 | 53 | 27 | 10 | 11 |
| Westmoreland*++ | 22 | 46 | 25 | 11 | 18 |
| Winchester*+ | 18 | 54 | 29 | 6 | 11 |

* Carding Mill

+ Clothier

work was limited to fulling and dyeing cloth made by others. In every occupational category, more men owned looms than did not. The only group for whom weaving was not the norm were transient or marginal persons; of the twenty persons listed on the census but found nowhere else in local records, nineteen were without looms.

Some loom-owning families in Topsham were obviously weaving for their neighbors, because 88 percent of households claimed cloth yet just over half possessed a loom. At six yards a day, the 4,593 yards credited to nonweaving families would have provided work for three full-time artisans or thirty domestic weavers working two or three days each month.⁵⁷ There may have been an artisan weaver in Topsham. A local history identifies James Fulton as the son of a "journeyman weaver of linen" from County Derry, Ireland, and Fulton left his own son "my writers desk and a kitchen table and weaver's loom" when he made his will in 1812. Still, a man need not work at a loom (or a kitchen table) just because he owned it. If Fulton was weaving for his neighbors, he had plenty of competition. That 76 percent of Topsham's widows but

⁵⁷ Working 28 days in May and June of 1815, an unidentified New Hampshire woman produced 138 yards for other families, alternating weaving with housework and spinning; anonymous diary, 1815-1816, N. H. Hist. Soc.

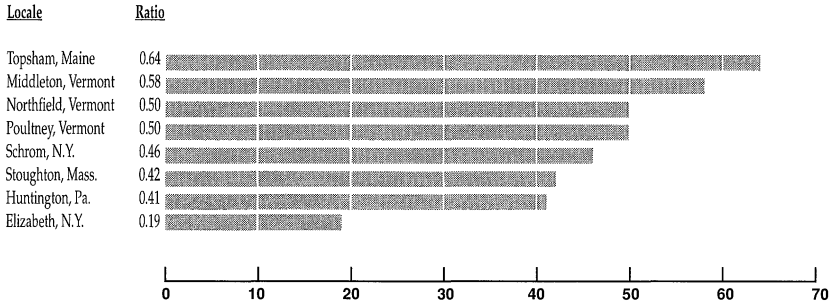


FIGURE V

Ratio of Loom-Owning Families to Cloth-Making Families in Eight New England Towns, 1810. Source: Manuscript census records, 1810, microfilm M252, reels 12, 18, 27, 49, 64, 65, National Archives, Washington, D. C.

only 56 percent of the general population owned looms argues that there, as elsewhere in New England, most weaving was done by women.

One can imagine a situation in which dozens of families made a little cloth while a few highly skilled (or hungry) weavers made a great deal. What was the mix of casual and committed weavers in New England towns? A census taker for New Salem in Hampshire County, Massachusetts, inadvertently provided evidence on this point by counting the output of looms rather than of households. As the proportion of loom-owning families in New Salem (46 percent) is similar to that in other parts of the region, his records give some hint about how weaving might have been distributed elsewhere. In New Salem, one family produced 1,000 yards in 1810. Eight others made 500 yards or more. The collective production of these high producers accounted for only 19 percent of the cloth made in the town in 1810. The remainder was scattered among 148 households, about a third of which wove more than 200 but fewer than 500 yards. The town mean was 186 yards, the median 130. Clearly, casual weaving was the norm.

How many days would it take to weave 1,000 yards? A compulsive Vermont weaver named Sarah Weeks made seventy-five yards in eleven days, spooling her "piece for sheets in twenty five hours," taking a full weekend, including the Sabbath, to make a harness, prepare a warp, and draw it in, and then weaving at a rate of ten yards a day. At such a pace, it would take 154 days to weave the 1,000 yards. If the cloth were finer or more complex than Weeks's, the time would be longer. All of this assumes that someone else grew and processed the flax or wool, carded and combed the fiber, spun it, measured it, and dyed or bleached the finished cloth. Adding these tasks to the equation would more than triple the hours

involved. Because most housewives—or their daughters—were also responsible for cooking, milking, baking, washing, gardening, and caring for children, it is hardly surprising that household weaving consumed only a few weeks of each year. The converse is also true. Because weaving took a relatively small amount of time, it enhanced rather than threatened an existing division of labor.⁵⁸

The census tells us nothing about the quality of the fabric made under such conditions. Fifty yards of linen might mean complex twill in one place, coarse sheeting in another. Women's diaries support the common-sense notion that many fabrics were plain woven and undyed, but they also document the ambition of some household weavers. With the help of her daughters, Sarah Bryant wove stripes, checks, and patterned coverlets, using locally gathered peach leaves, goldenrod, butternut bark, smartweed, and hemlock as well as imported madder, annetto, copperas, and indigo to dye her goods. In the 1820s, she wove a series of plaids for gowns, fine linen for shirts, and table cloths with "double diamonds" requiring eight harnesses on her loom. She reached her limit in 1833, when she attempted "12 wing damask" in a number 60 reed, finally taking it out and starting over with a simpler pattern.⁵⁹ Although machine carding and the occasional use of factory-spun yarn helped Bryant expand her repertoire, much of her cloth, including the ill-fated damask, was made from flax grown, retted, and spun on her farm.

Martha Ballard spent part of September 12, 1788, "whitening diaper," that is, bleaching the patterned linen fabric that her daughters had woven. Diaper was a staple of both apprentice-trained male weavers and their female successors. When Elizabeth Porter Phelps invited her Hadley neighbor to help her warp a piece of "over-shot," she was perpetuating another linen-weaving tradition.⁶⁰ Woven white on white, overshot patterns are subtle. When enlarged into coverlets made with indigo-dyed wool combined with fabric-spun cotton, they become quite dramatic. The names attached to patterns left by Peace Kirby of Dartmouth, Massachusetts, add a color of their own: Rose in the Garden, Heart's Delight, Flowers of Eddin

⁵⁸ Weeks, Loose sheet, 1835, Weeks Family Papers; Wheeler, *History of Brunswick, Topsham, and Harpswell, Maine*. The high producers in New Salem distributed their production among linen, wool, and cotton in the same proportions as the small producers. If any of these families were doing outwork weaving, it was in very small quantities. The 1,000-yard family wove 400 yards of cotton, but only 19 of the 157 weaving households produced 100 yards or more. The New Salem census taker listed only 3 categories—linen, wool, and cotton—giving no indication of how mixed-fiber fabrics were listed. The distribution of fibers is consistent across the spectrum, large and small producers making almost exactly the same proportion of each (about 50% linen, 29% wool, and the remainder cotton). In Stoughton, Mass., one household claimed 5,000 yards, more than a third of the total cloth production in the town. The head of this household had no loom, therefore he was obviously putting out fiber or yarn to his neighbors. In the town schedules I examined, this situation is unique. Some 3% of Stoughton families braided straw, 8% stitched shoes, and 2/3 produced cloth.

⁵⁹ Nylander, *Our Own Snug Fireside*, 179–81.

⁶⁰ Entries for June 14, 21, 1778, "Diary of Elizabeth (Porter) Phelps," ed. Andrews, 305.

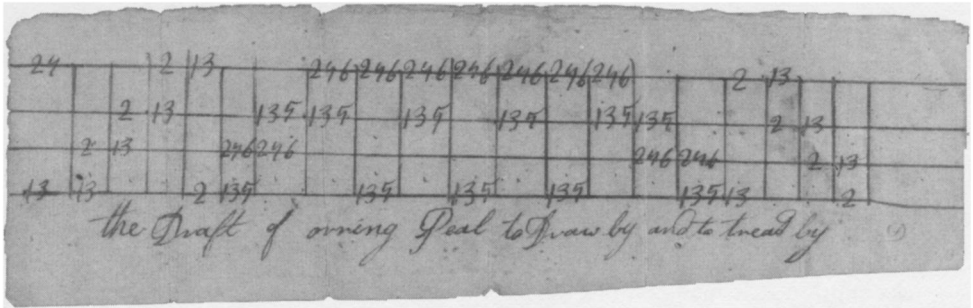


FIGURE VI

"The Draft of orring Peel [orange peel] to Draw by and to tread by," Peace Kirby's Pattern Draft. Old Sturbridge Village photograph by Thomas Neill.

Burg, Irish Beauty, Sixteen Blossoms, Wagon Wheels, Blazing Star, Prussian Leaf, Orring Peel. Some of these names echo folk songs and dances performed at quilting bees or spinning frolics in the New England countryside. Although Kirby's drafts, written on the back of old receipts, are strikingly different from the neatly lettered draft books and woven samples of artisan weavers, they attest to the aspiration of New England women (see Figures VI, VII).⁶¹

The range of textiles made by female weavers is suggested in the lives of two women whose work was recorded in the census of 1810. Mary Palmer Tyler, wife of Vermont Superior Court justice and early American playwright Royall Tyler, lived in Brattleboro, Vermont. Raised in the city, she first encountered the economy of homespun in the 1790s when her father's business failure forced the family to move from Boston to rural Framingham, Massachusetts.

We learned to spin, borrowing wheels of our good-natured neighbors, who seemed pleased to teach the city ladies their craft. We learned, while we lived there, to spin flax, on a little foot wheel, and wool, tow and cotton, on a large wheel. There was a plump rosy faced girl whose name was Zerniah Price, who was one of our nearest neighbors and who seemed to take great interest in teaching us. She taught us how to card wool, cotton and tow, and how to hatchel flax, some of

⁶¹ Isadora Safner and Diane Piette, *The Weaving Book of Peace and Patience* (Brewster, Mass., 1980), based on pattern drafts made by Patience Lawton Kirby and her daughter Peace Kirby Howland, Old Sturbridge Village, 26.60.1.2–31. On the range and complexity of early textiles and the difficulties in distinguishing local from imported fabrics see Hood, "Material World of Cloth," and Hood and Ruddel, "Artifacts and Documents in the History of Quebec Textiles," in *Living in the Material World: Canadian and American Approaches to Material Culture*, ed. Gerald Pocius (St. John's, Nfld., 1991), 55–91.

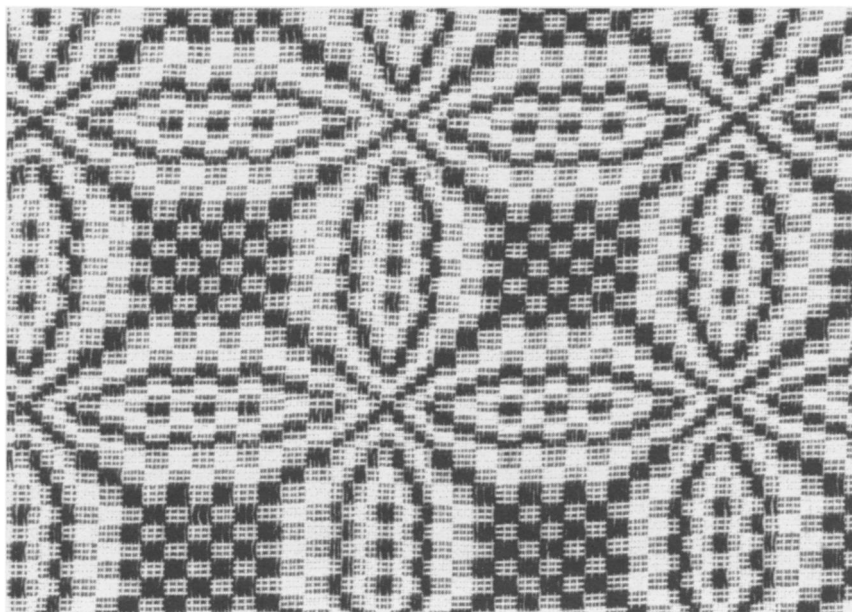


FIGURE VII

Indigo and Natural Coverlet Based on Peace Kirby's Orange Peel Pattern Draft. Old Sturbridge Village photography by Thomas Neill.

which was raised upon the farm; and my mother would change work with Zerniah's mother and other women, knitting and sewing for them while they would weave cotton and flax into cloth which we would get dressed into fustian at the mill for the boys and also for Father's summer working dress.⁶²

Twenty years later, finding herself on an isolated farm near Brattleboro, Tyler took up textile production in earnest. The Brattleboro census of 1810 credits no loom to Royall Tyler but lists ninety-eight yards of wool, sixty-nine of linen, and forty-nine of mixed-fiber cloth. "All this time my dairy and spinning wheels were busily attended, in your father's absence, by myself, with the assistance of one and at times two girls," Mary recalled. There were fifteen persons in the house in 1810, including four children under ten and three young women over sixteen, one of whom may have been Mary's younger sister Sophia, and two who could have been the "girls" Mary hired to spin flax for "sheets and common table linen." She turned

⁶² *Grandmother Tyler's Book: The Recollections of Mary Palmer Tyler, 1775-1866*, ed. Frederick Tupper and Helen Tyler Brown (New York, 1925), 141.

her weaving over to a Mrs. Peck, and then, when Mrs. Peck left town, to a Mrs. Fisher, who may have been the wife of the Ebinizer Fisher, listed in the census with a family of twelve (including three females over age ten). The Fisher loom produced 155 yards for family use and perhaps some part of the ninety-eight yards attributed to the Tyler household as well. Mary Tyler was a thrifty housewife, and she soon suggested another arrangement: "Having to give nine pence a yard for weaving, I suggested to your father the expediency of getting a loom, and having our flax and wool wove in the house. Ever ready to comply with my wishes, he got one immediately, and for twelve or fifteen years we made the children's clothes summer and winter for common wear."⁶³

Mary's allusion to having cloth woven in the house leaves the identity of the weaver (or weavers) hidden. Presumably Sophia or one of the unnamed girls hired to spin did the work. Tyler's memoir makes clear that homemade cloth might be used for everyday linens and children's clothing even in a professional household. At one point, she tried to make blankets "a yard and half quarter wide, being the capacity of our loom, intending to have them fulled at the mill and dressed so as to have two breadths in a blanket for the width." When the blankets came home, the miller had shrunk them so much she had to give up one full blanket in order to match the lengths in the other two, "spoiling the look of them" by requiring an extra seam. Though they were "very thick, white, and a fine nap upon them," she "was sadly disappointed" and apparently never tried the experiment again.

The career of Elizabeth (Eliza) Perkins Wildes Bourne, the wife of a Kennebunk, Maine, merchant and shipbuilder took a very different direction. Eliza Wildes's 1789–1790 diaries portray textile production in its most conventional form, a little sewing, a little weaving interspersed with household duties. "I spun one Black stocking Cleane[d] my West room and Scoure[d] the Pewter," on October 5, 1789.⁶⁴ When her first husband died at sea, leaving her with three young daughters, she married John Bourne, a merchant widower with six children. By 1810, she had fifteen children and stepchildren and a thriving textile business. Unlike Mary Palmer Tyler, Bourne used factory-spun cotton to produce what contemporaries would have called "fancy goods." In 1811, a local newspaper reported that she and her oldest daughters had in eight months' time woven 222 yards of cloth plus thirty-one white counterpanes, valued at \$10 to \$17 each.⁶⁵

Sandra S. Armentrout has identified eleven of Bourne's coverlets in New England collections. Previously overlooked because they appeared to

⁶³ *Ibid.*, 282–83.

⁶⁴ *Diary of Elizabeth (Eliza) Perkins Wildes Bourne.*

⁶⁵ Sandra S. Armentrout, catalogue entries, in Laura Fecych Sprague, ed., *Agreeable Situations: Society, Commerce, and Art in Southern Maine, 1780–1830* (Kennebunk, Me., 1987), 139–40; Laurel Thatcher Ulrich, "'From the Fair to the Brave': Spheres of Womanhood in Federal Maine," *ibid.*, 217–20.

have been manufactured commercially in Bolton, England, they show that with enough talent and the right combination of circumstances, a domestic weaver might move beyond utilitarian household products to become both highly skilled and commercially successful (see Figure VIII). The so-called Bolton coverlets, found everywhere in American collections, were made from factory-spun cotton in several weights, the thick weft being raised with picks during weaving to create the pattern. Bourne initially tried weaving her coverlets on a standard household loom, joining two narrow strips in the center as was customary for sheets, blankets, and the vast majority of patterned coverlets in America. The result, her son recalled, "did not satisfy her tastes; and she had a loom made of sufficient width to complete them in one piece." Bourne's warping bar survives, its width substantiating the tradition that she did indeed have a broadloom equipped with a fly shuttle.⁶⁶

In the introduction to his 1810 survey of manufacturing, Coxe lavished attention on what he called "our redundant southern cotton." Such a material, he wrote, might "render every industrious female an artizan, whenever her household duties do not require her time."⁶⁷ He might have been thinking of Eliza Bourne. In 1809, Bourne's daughter Abigail sent Dolley Madison a coverlet embellished with a woven inscription in the center: "Beneath this bed illustrious pair repose / Secure from foreign and domestic foes. / May white plumed seraphs watch around this bed, / And heaven its kindlier influences shed."⁶⁸ Bourne was able to combine industry with gentility, piety with patriotism, simultaneously upholding her family's social position and inculcating habits of industry and self-reliance in her daughters. The Bourne manufactory was limited as well as sustained by its family setting, however. When the older daughters married, the business collapsed. Or perhaps it only ceased. With her daughters launched, the mother had no need to continue her labors.

A gender division of labor that gave women control over their own and their daughters' labor was remarkably effective in mobilizing production, as the census of 1810 demonstrates. There were few Eliza Bournes and many Mary Tylers, Ruth Henshaws, and Martha Ballards, women who perpetuated a production system created in the colonial period. Their work in turn paved the way for a new industrial order that carried other women into factories in the 1830s, engaged many more in braiding straw hats or binding shoes in their rural households, and sent still others to new towns in the west.⁶⁹

⁶⁶ Edward Emerson Bourne, quoted in Armentrout, catalogue entry no. 139A-B, *ibid.*; Armentrout, "Eliza Wildes Bourne of Kennebunk: Professional Fancy Weaver, 1800-1820," in Peter Benes and Jane Benes, eds., *House and Home*, Annual Proceedings, Dublin Seminar for New England Folk Life, 1988 (Boston, 1990), 101-15.

⁶⁷ Coxe, *Statement of the Arts and Manufactures of the United States of America for the Year 1810*, xxxix.

⁶⁸ Edward Bourne, "The Bourne Family of Kennebunk," manuscript, Brick Store Museum; quotation in Armentrout, "Eliza Bourne of Kennebunk," 108.

⁶⁹ Table 1.1 in Dublin, *Transforming Women's Work*, 20, shows the continuing importance of outwork manufacturing even after the opening of the Lowell Mills.



FIGURE VIII

“Mary Wise, 1810.” Cotton Coverlet attributed to Elizabeth Perkins Wildes Bourne. Courtesy Brick Store Museum, Kennebunk, Maine.

To understand work in any period one must look closely at particular objects, tools, processes, and social relations. No agricultural historian would consider her work complete if she reduced all field labor to “farming.” We now know through the work of a generation of fine historians that rice, wheat, maize, indigo, sugar, and tobacco have different histories and, indeed, different cultures. Yet household labor is often reduced to a single, unvarying category from which women emerge in different ways and in different periods. This article argues that, long before New England women took up outwork or moved into factories, their work in household production changed. As sons moved into wage work, daughters became increasingly responsible for producing their own portions. Learning to weave as well as to spin, they borrowed implements from and exchanged work with neighbors, expanding their own productive capacities.

The shift in the division of labor described here both demonstrates an essential feminist argument—that gender is socially rather than biologically determined—and shows the importance of considering women’s work in

studies of long-term economic change. As economist Nancy Folbre has written, “The family cannot be conceptually segregated from ‘the economy’—it is one of many sites where individuals pursue their diverse and sometimes contradictory interests.”⁷⁰ New Englanders paid for consumer goods not only through chopping and sawing timber, raising grain and cattle, and building ships, but through the less visible work of cloth making in hundreds of rural households. Gloria Main argues that the ability to read and write, purchase goods at the store, and engage in occasional wage labor gave women “greater control over their own lives.” For historians interested in progress, household production offers its own repertoire of liberating opportunities—the ability to manage one’s own labor, the acquisition of skills, and the sociability of female work and exchange. In the aggregate, however, what is striking is neither the movement of women out of the household nor their expanding work in it but the overall investment of New England families in household goods.

Through subsistence production and store purchases, through diary keeping and accounting, in the rhetoric of revolution and the rituals of “changing works,” New Englanders affirmed the value of creating, maintaining, and embellishing material possessions. That their engagement with things had different consequences for men and women seems obvious; that the differences can be reduced to a linear progression from dependence to autonomy seems unlikely. The gender consequences of economic change, though significant, are difficult to untangle because women, like men, belong to different social groups and have different personal and economic assets. Elizabeth Fuller’s “sweet liberty” meant freedom from spinning and weaving. Had she been offered the chance to put down her spindle for a pen, she would gladly have complied. But for the anonymous New Hampshire weavers who turned down outwork weaving, that same domestic production represented freedom from the indignities of wage labor.

What is needed is a more nuanced understanding of household production, a historiography that considers both its constraints and its opportunities. To understand fully New England’s peculiar arrangement of wheels and looms, more work needs to be done on artisan weaving in the early colonial period and later, on fulling and dyeing, and on the manufacture of wheels, looms, reeds, shuttles, spools, and other equipment. To understand why cloth making thrived in one area and not in another, one also needs to know more about competing opportunities for men as well as women. Probate inventories, account books, letters, diaries, tax lists, and early censuses are filled with information on dairying, blacksmithing, candle making, brewing, chair making, gardening, shoemaking, joinery, and dozens of other rural crafts, any one of which may yield rich new insights into the gender division of labor. Comparative studies of the Chesapeake, the Lower South, and new states and territories also would be worthwhile. The early

⁷⁰ Folbre, *Who Pays for the Kids? Gender and the Structure of Constraint* (London, 1994), 39.

American household continues to invite strenuous productivity. To quote Martha Ballard, "A womans work is never Done as the Song says and happy shee whos strength holds out to the End of the rais."⁷¹

⁷¹ Ulrich, *Midwife's Tale*, 210.

Appendix

WHEELS AND LOOMS IN PROBATE INVENTORIES

| <i>Locale</i> | <i>Date</i> | <i>Number</i> | <i>Wheels (%)</i> | <i>Looms (%)</i> | <i>Spinning Households per Weaving Households^a</i> | <i>Ratio of Loom-Owning Households to Wheel-Owning Households^b</i> |
|--------------------------|-------------|---------------|-----------------------|----------------------|---|---|
| Litchfield Dist., Conn. | 1748–1754 | 51 | 76 | 22 | 3.55 | 0.28 |
| Litchfield Dist., Conn. | 1744 | 54 | 69 | 20 | 3.36 | 0.30 |
| Norwich Dist., Conn. | 1748–1753 | 25 | 76 | 20 | 3.80 | 0.26 |
| Norwich Dist., Conn. | 1768–1770 | 25 | 72 | 28 | 2.57 | 0.39 |
| Norwich Dist., Conn. | 1787–1789 | 50 | 70 | 26 | 2.69 | 0.37 |
| Norwich Dist., Conn. | 1808–1810 | 31 | 81 | 29 | 2.78 | 0.36 |
| Stamford Dist., Conn. | 1729–1741 | 50 | 68 | 10 | 6.80 | 0.15 |
| Stamford Dist., Conn. | 1745–1759 | 46 | 67 | 17 | 3.88 | 0.26 |
| Stamford Dist., Conn. | 1772–1774 | 45 | 76 | 9 | 8.50 | 0.12 |
| Stamford Dist., Conn. | 1788–1794 | 50 | 60 | 20 | 3.00 | 0.33 |
| Stamford Dist., Conn. | 1808–1812 | 39 | 85 | 13 | 6.60 | 0.15 |
| Wethersfield, Conn. | 1751–1760 | 74 | 76 | 11 | 7.00 | 0.14 |
| Wethersfield, Conn. | 1770s | 97 | 72 | 9 | 7.78 | 0.13 |
| Warwick, R.I. | 1750–1758 | 50 | 64 | 16 | 4.00 | 0.25 |
| Warwick, R.I. | 1770–1779 | 33 | 70 | 27 | 2.56 | 0.39 |
| Warwick, R.I. | 1790–1799 | 41 | 66 | 24 | 2.70 | 0.37 |
| Essex Co., Mass. | 1670s | 97 | 38 | 4 | 9.25 | 0.11 |
| Essex Co., Mass. | 1700 | 95 | 46 | 6 | 7.33 | 0.14 |
| Essex Co., Mass. | 1730 | 92 | 38 | 13 | 2.92 | 0.34 |
| Essex Co., Mass. | 1748–1750 | 48 | 48 | 19 | 2.56 | 0.39 |
| Essex Co., Mass. | 1774 | 98 | 55 | 16 | 3.38 | 0.30 |
| Essex Co., Mass. | 1792 | 50 | 50 | 22 | 2.27 | 0.44 |
| Hampshire Co., Mass. | 1669–1676 | 50 | 34 | 2 | 17.00 | 0.06 |
| Hampshire Co., Mass. | 1690–1700 | 64 | 63 | 19 | 3.33 | 0.30 |
| Hampshire Co., Mass. | 1730s | 50 | 64 | 20 | 3.20 | 0.31 |
| Hampshire Co., Mass. | 1750–1754 | 52 | 83 | 17 | 4.78 | 0.21 |
| Hampshire Co., Mass. | 1774 | 25 | 80 | 32 | 2.50 | 0.40 |
| Plymouth Co., Mass. | 1670s | 46 | 41 | 4 | 9.50 | 0.11 |
| Plymouth Co., Mass. | 1751–1756 | 80 | 56 | 33 | 1.73 | 0.58 |
| Plymouth Co., Mass. | 1774 | 28 | 57 | 29 | 2.00 | 0.50 |
| Suffolk Co., Mass. | 1749–1751 | 62 | 21 | 8 | 2.60 | 0.38 |
| Suffolk Co., Mass. | 1774 | 96 | 29 | 11 | 2.55 | 0.39 |
| Suffolk Co., Mass. Rural | 1749–1751 | 33 | 39 | 15 | 2.60 | 0.38 |
| Suffolk Co., Mass. Rural | 1774 | 45 | 62 | 24 | 2.55 | 0.39 |
| Topsham, Maine | 1880–1815 | 27 | 56 | 37 | 1.50 | 0.67 |
| Topsham, Maine | 1816–1825 | 25 | 60 | 40 | 1.50 | 0.67 |
| Topsham, Maine | 1761–1799 | 27 | 67 | 48 | 1.38 | 0.72 |
| York Co., Maine | 1670s | 39 | 21 | 0 | — | — |

Appendix (continued)
WHEELS AND LOOMS IN PROBATE INVENTORIES

| <i>Locale</i> | <i>Date</i> | <i>Number</i> | <i>Wheels (%)</i> | <i>Looms (%)</i> | <i>Spinning Households per Weaving Households^a</i> | <i>Ratio of Loom-Owning Households to Wheel-Owning Households^b</i> |
|-------------------------|-------------|---------------|-------------------|------------------|---|---|
| York Co., Maine | 1700 | 41 | 46 | 2 | 19.00 | 0.05 |
| York Co., Maine | 1730 | 37 | 38 | 3 | 14.00 | 0.07 |
| York Co., Maine | 1758–1762 | 78 | 69 | 21 | 3.38 | 0.30 |
| York Co., Maine | 1772–1774 | 47 | 53 | 36 | 1.47 | 0.68 |
| York Co., Maine | 1791–1794 | 47 | 57 | 30 | 1.93 | 0.52 |
| All counties, N. H. | 1730–1738 | 89 | 38 | 11 | 3.40 | 0.29 |
| All counties, N. H. | 1749–1752 | 78 | 73 | 23 | 3.17 | 0.32 |
| All counties, N. H. | 1770–1774 | 184 | 67 | 35 | 1.92 | 0.52 |
| Hillsborough Co., N. H. | 1791–1795 | 105 | 75 | 33 | 2.26 | 0.44 |
| Hillsborough Co., N. H. | 1808 | 31 | 81 | 48 | 1.67 | 0.60 |
| Strafford Co., N. H. | 1790–1791 | 43 | 70 | 47 | 1.50 | 0.67 |
| Strafford Co., N. H. | 1807–1812 | 58 | 57 | 45 | 1.27 | 0.79 |
| Strafford Co., N. H. | 1830 | 22 | 82 | 36 | 2.25 | 0.44 |
| Thetford Dist., Vt. | 1781–1793 | 25 | 56 | 36 | 1.56 | 0.64 |
| Chester Co., Pa. | 1715–1718 | 68 | 28 | 6 | 4.75 | 0.21 |
| Chester Co., Pa. | 1734–1737 | 102 | 51 | 7 | 7.43 | 0.13 |
| Chester Co., Pa. | 1754–1757 | 160 | 58 | 9 | 6.20 | 0.16 |
| Chester Co., Pa. | 1773–1776 | 242 | 67 | 8 | 8.53 | 0.12 |
| Chester Co., Pa. | 1792–1795 | 253 | 65 | 10 | 6.60 | 0.15 |
| Chester Co., Pa. | 1810–1813 | 179 | 58 | 6 | 9.36 | 0.11 |
| Chester Co., Pa. | 1828–1831 | 268 | 47 | 6 | 7.81 | 0.13 |

^a Number of households with wheels divided by number of households with looms. Note that owning two wheels, one for flax and one for wool, was common; owning more than one loom was unusual.

^b Number of households with looms divided by number of households with wheels.

Sources: *The Probate Records of Essex County* (Salem, Mass., 1916–1920), 2:237–432; *Maine Province and Court Records* (Portland, Me., 1931), II; Alice Hanson Jones, *American Colonial Wealth: Documents and Methods*, 2d ed., 3 vols. (New York, 1977), 1:403–606, 2:607–1096; and the following manuscript probate records: Essex County Probate Books 307, 329; Plymouth County Book, Suffolk County Book 44, Massachusetts State Archives, Boston; Hampshire County Probate Books 1, 3, 5, 7, County Court House, Northampton, Mass.; Probate Books 1, 2, 4, 5, 12, 13, 14, 22, 23, 24, 25, New Hampshire State Archives, Concord, N. H.; Book 5, Hillsborough County Probate Office, Nashua, N. H.; Books 1, 3, 12, 40, Strafford County Probate Office, Dover, N. H.; Litchfield Probate District, Books 1, 3; Norwich Probate District, Books 1, 3, 8; Stamford Probate Districts, Books 1, 2, 4, 8, Connecticut State Library, Hartford; Warwick Probate Records, microfilm, reels 1, 2, Rhode Island Historical Society, Providence; Transcripts of Wethersfield Inventories, Webb-Deane-Stevens Museum, Wethersfield, Conn.: Books 1, 2, 10, 15, 16, York County Probate Office, Alfred, Me.; Topsham records from Lincoln County Probate Books 2–23, Lincoln County Court House, Wiscasset, Me.; Chester County, Pa., numbers courtesy Adrienne Hood.