

## National History in the Local Landscape: Industrial Revolution in Sutton, Massachusetts

*Nora Pat Small*

Sutton, Massachusetts, in the Blackstone River Valley of southeastern Massachusetts, celebrated the nation's centennial with the publication of one of the best local histories of the period. When the Reverends Mr. Benedict and Mr. Tracy looked back over the 172 year history of their community, they found much to celebrate, but also more than a little to bemoan.

The trade in th[e] old store was very different from the trade of the present time, and the traders there all became rich. They took in farmers' produce, and sent a team to Boston every week.... They bought beef, pork, butter, cheese, grain, poultry, eggs, wool, feathers, flax and in fine any thing that the farmers then raised. Farming was a business. The *farmers of New England* then supplied the Boston market, and Sutton did her part. The railroads had not then injured farming interests in the eastern states.... The old church stood nearly opposite this store. It had no fireplace—it was before the day of stoves—yet the people attended church more than now. The women used to carry foot-stoves, filled with coals in the forenoon from their own fire-places; then at noon-time they would replenish them from the friendly hearths around the church, and no one suffered from cold.<sup>1</sup>

The world that Benedict and Tracy looked back on so nostalgically had taken shape in their grandparents' generation, but by 1876 the years of the early republic had come to stand for venerable, hitherto immutable, tradition. Before the railroads all the farmers and merchants had been rich; before the stove, all the people had been happy and God-fearing, or at least reverent. But if we look back before the railroad's arrival in 1847 to a time when the stove had only just begun to intrude upon the hearth, we find that in spite of the lack of the most obvious icons of the

<sup>1</sup>William Benedict and Hiram Tracy, *History of the Town of Sutton* (Worcester: Sanford and Co, 1878; rep. 1970), 283.

industrial age, every aspect of Sutton life was being transformed by industrialization. Furthermore, the farm life of yore evoked by the good ministers was a condition of that industrializing economy, not an exception to it. In embracing and promoting industry in the early nineteenth century, Sutton farmers, merchants, and artisans redefined their community physically and economically.

–The Farmscape–

In 1790 Sutton had been settled for seventy-four years. Families who had arrived in the first fifteen years of its white habitation, and still remained, were raising their third generation. The town had assumed a mixed manufacturing and agricultural character prior to the Revolution, and the war and events that followed served to intensify both pursuits. In the first years of the Republic farms and farming dominated the landscape and the economy. By the time this post-Revolutionary generation had grown to maturity, however, manufacturing shared the economic arena with agriculture, and had assumed a far greater presence on the land. In the midst of this industrialization, Sutton farmers quite literally held their ground.

In 1800 forty-one percent of Sutton's total land area was devoted to farmland—tillage, English or upland hay, fresh meadow hay, and pasturage. By 1841 that percentage had increased to nearly half (49.8%). In the intervening years total acreage in agricultural lands fluctuated, with the net result that Sutton gained less than ten percent more farmland between 1800 and 1841. Sutton, one of the longest settled towns in Worcester county, gained relatively little in farmland compared to the rest of the county where improved lands rose by twenty-three percent overall.<sup>2</sup> It appears that by 1800 Sutton's farmers had already

<sup>2</sup>Worcester county figures are from Jack Larkin's computer analysis of county-wide figures from the Worcester County Decennial Valuation Book, 1801-1841. Computer analysis available at Old Sturbridge Village Research Department, Sturbridge, MA.

improved most of the potential farmland in town. Although the amount of land in agricultural production rose only slightly, Sutton farming did not stagnate. Evidence suggests that local farmers overcame the physical limits of the land by altering farming strategies.

The farmers changed not only what they grew, but how they grew, stored and processed their produce. Of all the improved land in town, tillage accounted for the least number of acres, hay for about one-third of all improved acreage, and pasturage for fully half of those acres in the first four decades of the nineteenth century. While the total number of acres devoted to each category of improved land changed little, the actual use of the land changed markedly. The list of grains and legumes grown by Sutton farmers in 1801 reflects the diversified nature of farming inherited from their forefathers. The produce of the town's tillage lands included wheat, rye, oats, corn, barley, hops, peas and beans. The twelve cider mills operating in Sutton in 1830 attest to the importance of orchards as well.<sup>3</sup> By 1841, the profile of Sutton's produce from tilled land changed as farmers dropped marginal crops from production and devoted most land to corn, oats and barley. Anecdotal and circumstantial evidence suggests that apple orchards remained common, but local cider production ceased or fell off sharply by 1840. Sutton farmers devoted much of their improved land to hay. With most of the farmable land already utilized an increase in more valuable English hay relied primarily on a reduction of acres devoted to fresh meadow hay. By 1841 total hay field acreage had increased by only two percent, but the amount of improved land devoted to English hay increased by twelve percent.

Pasturage accounted for approximately half of all improved lands between 1801 and 1841. At the beginning of the century, the town's farmers kept horses, oxen, steers, and heifers on their

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<sup>3</sup>*Decennial Valuation Record Book for all Towns in Worcester County, 1801-1831*, Worcester County Papers, oversize volume 2, American Antiquarian Society, Worcester, MA. Cider mills counted in Sutton Valuation and Tax lists for 1830.

pasture lands. The rise of dairying as a commercial enterprise is implied in the 1831 tax valuation when cows (mature milk-producing females) were counted separately from heifers (young, non-milking females). By 1840, Sutton farmers claimed to be producing over \$10,000 worth of dairy products.<sup>4</sup> In addition to the more accurate counting of cattle in 1831, the tax assessor also counted sheep for the first time. Again, over the course of the previous decade, sheep had become a valuable commercial commodity as farmers found a ready market for their wool in the new local textile mills.

In all of these years, Sutton farmers managed only marginal increases in bushels of grain or tons of hay per acre. Agricultural production clearly had not been "improved" in the sense of increased yields on the same amount of land, but farming changed substantially. Not only did farmers adjust their production of venerable staple crops, they added new products (milk, cheese, butter, wool) in direct response to the rise of manufactures in their town and throughout the Blackstone River Valley.

Over the course of the first four decades of the nineteenth century, farming became increasingly specialized not only in the items produced, but in the population producing them. In other words, a higher percentage of the population became divorced from farm pursuits, meaning that in Sutton, fewer farmers provided slightly more produce on slightly more land. As more people found themselves removed from farming, both raw and finished agricultural products became more marketable. The trend can be seen in Sutton where in 1820 sixteen percent of the total population was involved in farming, while only a quarter of that amount, 4.5%, was involved in manufacturing. Ten years later the numbers had changed dramatically. Of the total

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<sup>4</sup>*Federal Census of Mines, Agriculture*, 1840, schedule for Sutton, MA.

population in Sutton, only ten percent was counted as farmers, while eleven percent was employed in factory production.<sup>5</sup>

–The Manufacturing Landscape–

While the scale of Sutton’s agricultural landscape did not change in the first forty years of the nineteenth century, it joined with much of the rest of the Blackstone River Valley in those years in changing the scale and scope of its manufacturing, in creating what has since been labeled the industrial revolution. With only half of its total acreage devoted to agriculture in the early national period, Sutton had plenty of room to accommodate larger mills and manufacturing complexes. In the 1810s and 1820s investors developed new water privileges and enlarged several sites already occupied by various types of mills. The largest manufacturing interests developed in the northeast corner of Sutton, along the Blackstone River (supplemented by the Blackstone Canal in 1828) and Cold Spring Brook, and in the southwest along the Mumford River and around Manchaug Pond, while smaller operations continued to operate on all water privileges. By 1830 Sutton’s manufacturing enterprises ranged from company-owned villages to small manufacturing enclaves to dozens of small shops scattered throughout town. Prior to 1840, a distinct *industrial* landscape emerged only around the largest manufacturing establishments—those in Wilkinsonville along the Blackstone River, and in Manchaug along the Mumford River. But manufacturing extended well beyond those sites. Scores of smaller shops emerged, run by local farmers, artisans, and mechanics.

<sup>5</sup>Figures for 1820 are from the 1820 Federal Decennial Census, which counted persons engaged in various pursuits such as agriculture and manufacturing. Figures for 1830 are derived from the town tax valuations, for the numbers of farmers, and from the Secretary of the Treasury’s [Louis McLane] *Documents Relative to the Manufactures in the United States* (Washington, D.C.: Duff and Green, 1833), vol. 1, doc. no. 308, for numbers engaged in manufacture.

Already renowned at the end of the eighteenth century for its “manufactures, its mills, and water works,” in the next four decades Sutton further exploited its water ways, and its natural and human resources, to increase production of goods for sale.<sup>6</sup> The expansion of the manufacturing landscape had little impact on farmlands, but significantly altered the town’s wetlands. With three large ponds, the Blackstone River, and numerous smaller streams and wetlands, Sutton never suffered from a shortage of water. Its streams provided several excellent natural mill sites. In the early decades of the nineteenth century Sutton residents increased the productivity of their ground water by redirecting, damming, and ponding it. In the final calculation, the town’s total acreage under water increased from one percent to just over four percent. While agricultural lands held steady, or gained slightly in the early nineteenth century, lands classified as unimproved or unimprovable, often marsh or swamp areas, fell off markedly between 1811 and 1841. In 1811, the first year with data that can be considered reliable for wastelands, unimproved and unimprovable acres occupied forty-four percent of Sutton’s lands. Thirty years later, less than twenty percent of Sutton was classified as wasteland. While some of that can be attributed to farmers’ reclamation of “waste,” increased amounts of land devoted to manufacturing accounts for most of the drop in unimproved acreage.

Many of the improvements to water privileges in this post-Revolutionary era required no sharp departure from long-standing practices, only a change in scale. Scythe production offers one example of the continuities between an economy and landscape dominated by agriculture, and an economy and landscape shared by manufacturing and farming interests. Blacksmiths probably produced scythes in the vicinity of West Sutton, along the Mumford River as it entered and left Manchaug pond, and on the water privileges to the north of Singletary Pond, for most of the eighteenth century, but the early history of these

<sup>6</sup>Peter Whitney, *The History of the County of Worcester* (1793, reprint, Worcester: Isaiah Thomas Books and Prints, 1983), 96.

shops is still vague.<sup>7</sup> By 1793 Sutton supported five scythe and axe shops and seven triphammer shops. Some of the blacksmith owners of those triphammer shops—water-powered and horse powered—used them to turn out scythes and axes by the 1780s.<sup>8</sup>

The nature of scythe manufacturing in Sutton seems to have changed in the 1810s. In 1813 four local men established a scythe manufactory along Cold Spring Brook. The number of investors suggests that this was to be a larger-scale operation than the older blacksmith-owned and -operated shops. These men sold out within a couple of years to Captain Asa Woodbury. Woodbury set about to improve the site, and by 1833 he owned at least two houses, a scythe and spindle shop with water-powered trip hammer, and a woolen mill, all along the banks of Cold Spring Brook. One of Woodbury's houses was the "Company's House", and very likely housed the six adult males he employed in the scythe and spindle shop.<sup>9</sup> In this way, Woodbury not only supplied the growing textile factories with spindles, but continued to serve farmers by producing the venerable scythe.

All told, Sutton's three major scythe manufacturers shipped out over 13,000 scythes in 1833 to dealers in Massachusetts, Maine, and New York. The scope of these operations had broadened from pre-Revolutionary times, but some aspects of this work fell well within long-standing practices. Unlike the textile mills, with their dozens of laborers, the scythe shops employed between four and six young men over agesixteen. The work evidently continued to require some level of skill, for they all received between twenty-five and fifty cents more per day than their counterparts in the local cotton mills. In a pattern of

<sup>7</sup>Benedict and Tracy, 526-7; Whitney, 96.

<sup>8</sup>Conclusions drawn from genealogical and occupational information supplied in Benedict and Tracy on individuals engaged in scythe making. Benedict and Tracy, 186, 361, 532, 541.

<sup>9</sup>Information on Woodbury is as yet incomplete, but this much has been gleaned from Benedict and Tracy, *History*, 532, 756; Sutton Valuation and Tax List, 1830; McLane, *Documents Relative to the Manufactures in the United States*, doc. no. 308.

work familiar to all "pre-industrial" workers, the shop owners employed their help only eight to ten months out of the year.<sup>10</sup>

That work pattern in water-powered operations had always been due to both the seasonal flow of water and to the rhythms of farm work. Lewis Torrey and David Dudley, both relying on water-powered trip-hammers in their shops, continued to operate in this farmer/artisan mode. Lewis Torrey, remembered in the 1878 Sutton history only as a blacksmith with a small shop in the Manchaug district, produced 3600 scythes a year. Torrey's real estate consisted of a house, shop, barn, and sixty-six acres. In the 1830s Torrey owned two oxen, which provided the means of planting at least some of his acreage; two to four cows, the produce from which may have been used only to feed his large family (thirteen children by 1839); and a horse. He also kept a hog each year for butchering. In 1835, Torrey's profits enabled him to loan out \$400 at interest. David Dudley followed a very similar strategy. He maintained two houses, two shops, a barn and forty-six acres. He, too, prepared fields with two oxen and kept four cows, a horse or two, and a hog. With his children ranging between the ages of twenty-six and thirteen by 1830, the milk from the Dudleys' four cows may have been used by Mrs. Dudley and her adolescent daughter to produce saleable butter and cheeses.<sup>11</sup>

Like their counterparts in previous generations, Torrey and Dudley continued to pursue a number of means of maintaining their households and attaining a competence. The rhetorical division between farmers and mechanics, or farmers and artisans, played up by so many of the early Republic's politicians and popular speakers, would not have been recognized by these men and their families. Farming remained an important part of their economic strategies, as did production of agricultural implements. With larger and more efficient triphammer shops these artisans could produce on a scale that allowed them to

<sup>10</sup>McLane, doc. no. 308.

<sup>11</sup>Sutton Valuation and Tax Lists, 1830, 1835.

supply the growing regional markets, and on a scale that earned them the title of manufacturer rather than smithy.

The mill villages that developed throughout the Blackstone River Valley in the generation after the War for Independence far outstripped enterprises like those of Dudley and Torrey in terms of capital invested and capital improvement, but they developed alongside those operations, neither replacing them nor prompting their existence. The industrialization of the countryside did not occur because the larger manufacturers moved in, but because of broader demographic and economic developments in which everyone participated, albeit on unequal footing in some cases. Sutton's company-owned mill villages, while controlled by outside investors, do not seem to have pre-empted local initiative, nor were they entirely without local associations.

The earliest of the two major company villages in Sutton grew along water privileges on the Blackstone River in the northeast corner of town. While Asa Woodbury developed his water privileges with his scythe, spindle, and wool operations, Elijah and Asa Waters, Jr., of the newly incorporated town of Millbury, gained control of water privileges along the Blackstone River.<sup>12</sup> In Sutton, Asa Waters acquired a site known as the Dudley Farm in 1815, and built a dam, a saw mill, a grist mill, and a small cotton yarn factory. The yarn mill burned in 1822 and Waters sold the entire site to David Wilkinson of North Providence, Rhode Island, in 1823. Wilkinson promptly built a stone factory in which he manufactured cotton thread. Between 1823 and 1829 he developed the site extensively, enlarging the factory, constructing a hotel, an Episcopal church, a bank, and several dwellings for the company's employees.<sup>13</sup> Dependence on extra-local capital could, and often did, spell the destruction of local industries during the frequent financial panics of the nineteenth century. But in the case of Wilkinsonville, a combination of non-local capital and kinship saved the place

<sup>12</sup>*Centennial History of the Town of Millbury, Massachusetts*, (Worcester, MA: Davis Press, 1915).

<sup>13</sup>Benedict and Tracy, *History of Sutton*, 536.

from the panic of 1829 which bankrupted many locally-financed operations. When Wilkinson failed in 1829, Samuel Slater, to whom he was related by marriage and who held notes on the factory, assumed ownership of Wilkinsonville. Slater, the renowned designer of the first mechanized spinning mill in the United States in the early 1790s, financed and owned mills throughout the Blackstone River Valley.<sup>14</sup>

Local men served as agents or superintendents of the Wilkinson mills for at least part of the village's early history. The nature of the relationships between the absentee owner and his supervisors remains unclear at this point, but some tantalizing evidence suggests at least a high level of regard for Wilkinson, if not a personal relationship. In addition, it is evident that these relationships involved individuals of equal, or near equal, status. Deacon John Morse, a tanner, descendent of Morses who arrived in town in 1734, and a man of some standing in his own right in the community, served as the agent for Waters' yarn mill. He may have continued in that capacity for Wilkinson, for the Morses named their last son, born in 1825, for the mill owner. Morse is lost to the local records before 1830, when the assessor began to keep detailed records of personal and real property, but the house he built on the Boston Post Road east of the town center between 1811 and 1815 still stands. Like many of his contemporaries Morse built a two-story, center hall house with an integral rear ell. Finished with the delicate detailing of Federal-era neo-classicism, the Morse house displayed a level of taste expected of genteel folk, as well as a thoroughly modern concern for convenience. All of this added up to a statement of independence and stature.<sup>15</sup>

<sup>14</sup>See Jonathan Prude, *The Coming of Industrial Order* (Cambridge: Cambridge University Press, 1983).

<sup>15</sup>For a fuller development of the significance of the house type and ornamental detailing see Nora Pat Small, "Beauty and Convenience: The Architectural Reordering of Sutton, Massachusetts, 1790-1840," Ph.D. dis., Boston University, 1994.

Joshua Armsby, junior, a machinist and carpenter, served as superintendent for the Wilkinson mills for several years. A man of considerable personal property, Armsby also served as representative to the Massachusetts General Court for four years in the 1830s, and established his own machine shop in 1835. Armsby, who built a large two-story, double-pile house with side ell on the occasion of his second marriage in 1823, evidently farmed with the same intensity he pursued his mechanical interests. By 1830 he owned 93 acres of land, two oxen, four cows, two hogs, and one pleasure horse. In 1839 he built a modern New England barn, and by 1841 he owned three more head of cattle and thirty more acres. Armsby continued to accumulate more land and more livestock for at least the next ten years.<sup>16</sup>

For men like Morse and Armsby, the industrialization of their rural neighborhoods brought increased opportunity. Neither Morse nor Armsby depended upon the Wilkinsonville mills for their livings. Unlike the sixty women and girls who earned forty cents a day, or the dozen boys under sixteen years old who earned thirty cents a day, or the twenty men who earned a dollar a day, Armsby and Morse commanded other sorts of capital—including cash, credit, real or personal estate—that they could put to work for them. With the coming of larger-scale industries, they could cash in as well on their artisanal or mechanical skills.

The growth of cotton mills like those at Wilkinsonville and the even larger operation in Manchaug afforded still other opportunities for the mechanics of the Blackstone River Valley, including supplying the demand for shuttles. As had been the case with scythe manufacturing, the industrialized production of shuttles fit into established patterns of work. By the early 1830s, Sutton had three shuttle manufacturers, all of whom seemed to operate on the same scale as the scythe makers. As at the scythe

<sup>16</sup>Benedict and Tracy, 370, 537, 699. Information on Joshua Armsby is also extracted from the Sutton Valuations and Tax Lists, 1830, 1835, 1841, 1845.

shops, the four to six employees at each shop worked only ten months out of the year and earned twenty-five cents more per day than their counterparts in the mills. This work could be either water- or horse-powered. Milton Ruggles built his shuttle shop on an eighteenth-century grist and saw mill site north of Wilkinsonville, at Pleasant Falls, in 1832.<sup>17</sup> Joseph Hathaway produced shuttles at his horse-powered machine shop in the early 1830s, but sold out before 1835 to Ezra S. Marble.<sup>18</sup> Marble's modest endeavor gradually grew into a family manufacturing enclave known as Marbleville. Through the construction of reservoir and dams, Marble turned his entire operation into one powered by water.<sup>19</sup>

Like his counterparts in scythe-making, shuttle-maker Origen Harback pursued both farming and manufacturing. Married before 1817, Origen controlled a good amount of capital by the time his last child was born in 1824. In 1830, the earliest enumeration of personal and real property available, Harback owned a house, a barn, a shop, fifty acres, a chaise, four cows, two other head of cattle, a pleasure horse, and two hogs. Throughout the 1830s and 1840s Harback kept between four and seven head of cattle of various kinds, a horse or two, and at least one hog. His land holdings never fell below fifty acres. For at least fifteen years, Harback operated two shops. When Samuel Ward observed Harback's shuttle operation in the early 1830s, he pronounced its machinery "the most ingenious and useful of any that has come under my examination. The wood work of the shuttle, after it is blocked out, is entirely completed by the operation of machinery, for the reception of irons."<sup>20</sup> Harback successfully negotiated the mixed agricultural and manufacturing economy of the early nineteenth century using already well-established models. His own great-uncle had established a carding and fulling mill in Sutton around 1776, and his cousin,

<sup>17</sup>Benedict and Tracy, 417.

<sup>18</sup>Benedict and Tracy, 391, 399, 531.

<sup>19</sup>Maps of Sutton, 1831, 1857. Benedict and Tracy, 531-2.

<sup>20</sup>McLane, doc. no. 308.

Thomas Harback, junior, had built a woolen broadcloth mill with power looms in 1822. Even with new endeavors such as the large-scale manufacture of shuttles, then, old patterns of achieving or ensuring competencies persisted.

–The Industrialized Farmscape–

While Torrey, Dudley, and Harback all represent the successful integration of agricultural and manufacturing pursuits, they were also among the few who could afford such capital-intensive ventures. In industrializing southeastern Massachusetts, farmers, artisans, mechanics and their wives and children combined agriculture with handcraft work at a level not worthy of note in the Secretary of the Treasury's 1833 census of manufacturing, but well worth noting here. This domestic production manifested itself in the landscape, as families rebuilt and rearranged their homes and homesteads, and as they added increasing numbers of shops to their holdings.<sup>21</sup> The rebuilding of homesteads is a story unto itself, beyond the scope of this paper, but the growth of shops illustrates the point nicely.<sup>22</sup>

Sutton's shops boomed in the 1810s, prior to the establishment of local large-scale textile mills, but simultaneously with the rise of textile mills throughout the Blackstone River Valley.<sup>23</sup> A shop consisted of an operation such as black smithing, coopering, wheel wrighting, cabinet-making, carriage-building, fancy painting, or shoe making. The Worcester County Decennial Valuation for 1801-1831 lists these

<sup>21</sup>On outwork systems see Thomas Dublin, *Women at Work: The Transformation of Work and Community in Lowell, Massachusetts, 1826-1860* (New York: Columbia University Press, 1979); *idem*, "Women and Outwork in a Nineteenth-Century New England Town: Fitzwilliam, New Hampshire, 1830-1850," in *The Countryside in the Age of Capitalist Transformation: Essays in the Social History of Rural America*, ed. Steven Hahn and Jonathan Prude (Chapel Hill: University of North Carolina Press, 1985), 51-69; Prude, *The Coming of Industrial Order*, ch. 3.

<sup>22</sup>On the rebuilding see Small, "Beauty and Convenience."

<sup>23</sup>Prude, *The Coming of Industrial Order*, ch. 2.

as "shops within or adjoining to dwelling houses," and as "other shops." They were counted separately from all types of factories and mills. Sutton started the new century with a total of thirty shops. In 1831, Sutton and Millbury together (Millbury having been hived off from Sutton in 1813) contained 101 shops, with over half of those being in Sutton. Worcester, at the headwaters of the Blackstone River just north of Millbury, showed comparable growth. That town had only eighteen shops in 1801. The number increased sevenfold by 1831 to 123. Throughout the Blackstone River Valley, the story was the same.<sup>24</sup>

William Hall, farmer, housewright, and millwright, was among those individuals who contributed to the rise of shops in the 1810s. Hall returned home to Sutton from Warwick, Rhode Island, around 1811. Assuming possession of the old family farm, he made many improvements, including a house ell that contained his workshop, and New England barn. An enclosed breezeway connected the ell to the northeast corner of the house. The west end of the ell contained a chimney stack with set kettle. Hall's enormous work table stood against the north wall. The workshop extended beyond the east end of the ell, onto a flagstoned area. An open wood shed, its ridge at right angles to the ridge of the ell, projected from the front right corner of the ell, completing the work area. With the house, these structures formed a small courtyard.<sup>25</sup>

To the east and south of these buildings stood the farm structures, their roof ridges all parallel to those of the house and ell. The cellarless New England barn, itself a sign of modernized farming practices, could be entered from the fields to the east, or from the drive to the west. One small shed remains to the left of the barn, another that stood southwest of the barn is gone. These buildings formed the east side of a large yard or courtyard. The house and ell defined the north side, and a stone wall enclosed the south side. Within this courtyard male and female farm and

<sup>24</sup>Prude, *The Coming of Industrial Order*.

<sup>25</sup>All physical description is from field work conducted by the author.

manufacturing activities would have mixed freely, the women passing back and forth between the barn and house as they carried on the dairying, the men's daily activities taking them between field, barn and ell. Like his counterparts in scythe and shuttle production, Hall employed extra hands. Four male laborers lived with the Halls in 1820. The census taker in that year recorded only one individual engaged in agriculture, suggesting that the laborers assisted Hall in his shop. In 1830 the Halls had only two extra male hands.

Hall's 1859 inventory of his estate paints a portrait of an active farmer. His livestock included a horse, a pair of oxen, ten other head of cattle, pigs, and fowls. His farm tools included three grain cradles, a cultivator, and three plows. But he also still owned his wood-working tools, among which were a cross-cut saw, two wood saws, three axes, chisels, an adze, a try square, and several chests of unenumerated tools. Hall's real and personal estate indicates that he was equipped to pursue two occupations. In the larger scheme of things, Hall and his wife made only modest alterations to the landscape, but those alterations enabled them to accommodate their multiple roles and occupations in the mixed agricultural and manufacturing economy.

If we define a farmer as an individual with reported land and livestock holdings on the Sutton town valuations and tax lists, then farmers owned eighty-five percent of the shops standing in town in 1830, and seventy-six percent in 1841. The definition is broad, but it eliminates everyone who was completely divorced from agriculture. The property holdings of these shop-owning farmers ranged from four acres to 265, the median holding being forty-five acres and the average sixty-seven, comparable to the town-wide average of fifty-eight acres. Their livestock holdings ranged from one cow to forty-six animals, with everyone owning at least one cow. Shop owners held an average of 3.75 cows

each, an increase of one animal over the town-wide average.<sup>26</sup> These farmers supplied not only the local store-keepers, but extra-local markets with butter, cheese, shoes, combs, tools, plows, furniture, and more. When Benedict and Tracy wrote in 1878 of the "certain returns of honest industry upon the farm," they may have had these industrious farmers in mind—the people of their grandparents' generations whose time-softened stories and reminiscences of farm life prior to the disruptions of the Civil War may indeed have sounded like a golden age.<sup>27</sup>

The increased presence of manufacturing interests in Sutton in the early nineteenth century resulted from a modification of already established practices and from the introduction of newer, centralized factory work. The change was incremental, revolutionary more in its cumulative effect than in its immediate impact. Farmers, artisans, and mechanics altered their production strategies and their physical environments, expanding old operations or offering new services and goods as the opportunities presented themselves. In addition, investors from outside the community brought in new sources of capital, building up water privileges, developing manufacturing villages, and providing new markets for both manufactured and agricultural goods. In Sutton, and throughout the Blackstone Valley, manufacturing and farming existed cheek by jowl well into the twentieth century. The symbiotic nature of this rural industrial economy can still be read in the landscape today.

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<sup>26</sup>Sutton Valuation and Tax Lists, 1830, 1841. I cannot yet account for the discrepancy in the number of shops reported in the local tax lists, and the numbers reported in the Worcester County Decennial Valuation Record Book. The Decennial Valuation Book contains much higher shop numbers. All numbers used to count farmer-shop owners and non-farmer shop owners are from the Sutton tax lists.

<sup>27</sup>Benedict and Tracy, 255.