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Manufacturing in Puritan rural towns in New England 1630-60: 'A Miller Never Goes to Heaven'

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Abstract

This article is an analysis of the influence of blacksmiths, and saw and grain millers on the development of Puritan communities in the Massachusetts Bay Colony between 1630 and 1660. During this period these artisans played a significant role in defining the physical form of the rural Puritan town and its economic development, without intent and in a social and cultural climate where they were often disliked and distrusted. This article focuses on the impacts of these manufacturers on the formation and physical character of Puritan communities in New England.

Introduction

This article is an analysis of the influence of blacksmiths, and saw and grain millers on the development of Puritan communities in the Massachusetts Bay Colony as it evolved between 1630 and 1660. This period represents the time where the first generation of Puritan settlers were in civil and spiritual leadership positions and created the foundations for their colony. The premise of the article is that during this period the smith and the millers played a significant role in influencing the evolution of the physical form of the rural Puritan town and its economic development. They did so without intent and in a social and cultural climate where they were often disliked and distrusted. Moreover, while there was extensive forethought by the General Court and townspeople on the placement of the Meeting House, residential areas and agricultural lands in Puritan communities, there was relatively little concerning the needs and placement of these manufacturers. While there has been a significant amount of scholarly study of the Puritan community in virtually all of its aspects, there has been, in comparison, very little that has holistically focused on the impacts of these manufacturers on the formation and physical character of these places. It is the intent of this article to contribute to overcoming this paucity.

The research for this article is based on a combination of primary and scholarly sources. The primary sources include the formal records of the Colony and the personal histories and papers of colonial leaders. Concerning the formation of towns and the regulation of mills, town records relating to the place and space of mills in their communities have been examined. And finally, an extensive array of scholarly work on the planning and economic development of these places has been analysed.

The article is written through the lens of town planning history, a subject area that embraces the critical factors that have influenced the formation and evolution of towns over time. These factors include an examination and interpretation of how towns meet the needs of residents in terms of housing, economic development, culture, faith, socialisation, and the environment in an integrative manner. Moreover, it reflects on the role the town as it responds to imposed legal constraints and seeks to govern itself.

Puritan town planning and development

In early 1630, approximately one thousand passengers, most of whom were Puritans, assembled in Southampton, England, where they were about to embark in seventeen vessels on a voyage to New England (America). Upon arriving, they intended to establish a permanent Christian, covenanted community where they could worship in peace under the protective governance of the Massachusetts Bay Colony.[1] Consisting of a carefully selected diverse group of volunteers mainly from counties in East

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[1] Samuel Eliot Morison, *Builders of the Bay Colony: A Gallery of our Intellectual Ancestors* (Boston, 1930), pp. 65–71.

Anglia, they included, among others, farmers, yeomen, millers, merchants, artisans and craftsmen. These passengers were well prepared for the tasks that faced them.[2]

As ready as the immigrants were for their journey to the wilderness, there was little understanding of the form of community that was to emerge upon their arrival. In an ideological sense, John Winthrop, the appointed governor of the Massachusetts Bay Colony, had prepared a sermon before departing England entitled 'A Model of Christian Charity', that laid out the fundamental objectives of their community.[3] It was to be 'as a City upon a Hill, the eyes of all people are upon us'.[4] In essence, it was to be a place where Puritan spiritual values would provide the foundation of the community and serve as a guide for those who followed.[5] In a pragmatic sense, Winthrop envisioned the Puritans would initially form one large city that would initially serve as the spiritual and civic centre of the colony. Over time, it was expected that under careful regulations and as the colony grew, new settlements would be formed.[6]

Upon arrival in the Colony, the settlers readily embraced Winthrop's ideological position but just as strongly rejected his call for a large, centralised community and quickly dispersed into small 'plantations' surrounding Boston. The term 'plantation' was used as a metaphor for sinking roots in an independent, holy and safe place. Based on 2 Samuel 7:10, it was the central theme of minister John Cotton's rousing sermon to the departing members of the Winthrop fleet.[7] These communities quickly took on the character of the settlers' former hometowns. As historian Charles Frances Adams Jr commented: 'The Puritans were English in England; they were no more or less than English in Boston Bay.'[8] Once approved by the General Court, these communities came to be called towns. They were defined as bordered municipalities, which typically included a core village, outlying settlements and hamlets. With the exception of Boston and Salem, all were rural in character. They were agriculture-based, low density, inward looking, and autarchic-like places of shared values. In 1635, the Court passed an act granting a significant amount of decision making authority to the towns.[9] As historian John Frederick Martin opined: Puritan towns were 'part land company, part borough, part joint-stock company and part village'.[10]

Within four years of arriving in Boston, eight towns had been formed and, as additional Puritans and fellow adventurers continued to move to the Colony, the General Court was being asked to create more towns. The Court became increasingly concerned over whether these proposed towns would be

[2] David Cressy, *Coming Over: Migration and Communication Between England and New England in the Seventeenth Century* (New York, 1987), p. 44.

[3] John Winthrop, 'A Model of Christian Charity', *Winthrop Papers* (Boston: Massachusetts Historical Society, 1931), vol. 2, pp. 282–7.

[4] Winthrop, 'Reasons to be Considered and Objections with Answers', *Winthrop Papers*, vol. 2, pp. 138–44.

[5] Abram C. Van Engen, *City on a Hill: A History of American Exceptualism* (New Haven, CT, 2020), pp. 49–59.

[6] Winthrop, *Winthrop Papers*, vol. 2, see the plate following p. 276. Also see William Haller, *The Puritan Frontier: Town Planting in New England Colonial Development, 1630–1660* (New York, 1957), p. 55.

[7] John Canup, *Out of the Wilderness: The Emergence of an American Identity in Colonial New England* (Middletown, CT, 1990), p. 9.

[8] Charles F. Adams, 'The Genesis of the Massachusetts Town and the Development of Town-Meeting Government', *Proceedings of the Massachusetts Historical Society*, Series 2 (January 1892), p. 58.

[9] Nathaniel Shurtleff, ed., *Records of the Governor and Company of the Massachusetts Bay in New England, 1628–1686* (Boston: The Commonwealth of Massachusetts, 1853), vol. 2, p. 172.

[10] John Frederick Martin, *People in the Wilderness: Entrepreneurs and the Founding of New England Towns* (Chapel Hill, NC, 1991), p. 24

committed to creating spiritual places where the rigorous tenets of Puritan life would be embraced, where social needs could be met, where the land would be fully in productive use and where the community could be protected.[11] In 1635, the General Court took action on its concerns and decreed that henceforth, no dwellings would be placed beyond one half-mile of the meeting house in any newly approved town planting.[12] Most interestingly, the homes of millers were exempt from this legislation provided they lived somewhere in the town.[13] Beyond this act it undertook very few other major actions concerning the planning of new towns. However, in *Winthrop's Papers*, there is an anonymously written essay called 'The Ordering of Towns', which laid out the ideal land use characteristics that were intended to guide the creation of additional towns henceforth.[14] Written prior to 1638, and despite not being legally binding, it appears to have significantly informed and influenced the layout of new towns for the next twenty-six years.[15]

The essay, in concept, called for the town to consist of a six-by-six mile square with six concentric zones. In the inner most circle (zone one) would be placed the required meeting house. This zone was to function as both the spiritual and administrative centre of the town. Typically surrounding the meeting house would be the town common, small artisanal businesses, the militia training field, the blacksmith and a tavern or ordinary. It would be adjoined by dwellings that were intended to be grouped in a manner to create a strong sense of community (zone two). Beyond the dwellings would be common lands that were to be worked for the public good (zone three). Here one would find the town's livestock communally managed by husbandmen. All dwellings in zone two would be located such that there was easy access to both religious activities and the common fields. Continuing outwardly, land would be reserved for 'men of great estate' who, because of their rank and contributions to the community, would be granted parcels of three to four hundred acres of land (zone four). Beyond these properties would be land set aside in thirty- to forty-acre parcels for freehold farms (zone five). The parcels in zones four and five would only be released when the town had attracted a sufficient population, had organised itself into a working spiritual and governmental organisation and had achieved a secure financial footing. It is in these last two zones where, over time, small very rural hamlets and villages emerged that were commonly occupied by kinship or affinity groups first formed by settlers from England or residents of other towns in the Colony.[16] The outermost ring (zone six) was to consist of marshes, swamps, lands unsuitable for agriculture and the forest wilderness. It would be often used for such public purposes as sites for saw or grist mills. It also consisted of the largest amount of acreage and served as a clear demarcation of the town's limits.[17]

The General Court recognised, as the towns grew and villages expanded, more land would have to be allocated and more villages formed in the outer reaches of the town. It was also concerned, due to the increasing distances from the meeting house, these incomers would become detached from the Puritan's spiritual activities.[18] For these reasons, it created a 'hiving-off' process that would allow

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[11] Shurtleff, ed., *Records of Massachusetts Bay*, vol. 1, p. 76. Also see Joseph S. Wood, *The New England Village* (Baltimore, 1997), p. 45.
[12] Shurtleff, ed., *Records of Massachusetts Bay*, vol. 1, p. 159.
[13] Darrett B. Rutman, *Winthrop's Boston: Portrait of a Puritan Town* (Chapel Hill, NC, 1965), p. 93.
[14] Winthrop, 'Essay on the Ordering of Towns', *Winthrop Papers*, vol. 2, pp. 181–2.
[15] John R. Stilgoe, 'The Puritan landscape: ideal and reality', *Landscape*, 20 (spring 1976), 3–7 (p. 3).
[16] John Winthrop, *Winthrop's Journal: The History of New England from 1630–1649* (New York, 1825–1826), vol. 2, p. 263.
[17] Stilgoe, 'The Puritan landscape', pp. 3–7.
[18] Shurtleff, ed., *Records of Massachusetts Bay*, vol. 1, p. 272; vol. 2, p. 263.

villagers to create their own newly formed municipal towns.[19] There were four conditions: There had to be a core group of potential settlers consisting of at least sixty families; its leaders had to show they had the means to build a meeting house and pay for the services of a minister; they had to convince the Court it had competent leadership; and, finally it had the means to fund town services. All of these new towns were serially connected to each other and, by so being, reinforced the Colony's goal to strongly interconnect communities and strengthen the residents' commitment to Puritan beliefs, to stimulate inter-town trade, and to create a more secure colony. An examination of approved towns in the 1630–60 period shows that there were extensive inland town formations throughout the colony for approximately thirty miles as well as in the Connecticut River Valley, the Colony's 'bread basket' located approximately ninety miles west of Boston.[20] The open hinterland areas between them continued to recede as settlers moved westerly to form new communities.[21]

The essay was never followed to the rules or letter but did serve as an effective guide for many of the towns authorised in the first three decades of Puritan settlement. For example, most towns created an active nucleated core surrounding the meeting house, approved residential properties in small, dispersed hamlets and villages within easy reach of both the core and the common fields and designated areas for future growth.[22] In a final analysis, it appears that the towns took on their form based more on topography, natural features, their memories of their home communities in England and their own collective values.[23] It was this last point that was most important. The towns that emerged over time were the result of 'persistent localism' where the settlers made their own decisions concerning the future of their community.[24] One of their most important tasks was the attraction and selection of the blacksmith and millers.

Smiths and Millers in the Puritan community

It has been said that the Puritan town required four essential elements if it were to succeed: a meeting house with a pastor, a blacksmith, a sawmill and a grain mill.[25] With the possible exception of the exact location of the meeting house, how large it was to be, or its design, there was little controversy over the fact that one would be built: a meeting house was an indispensable part of every Puritan community. Given the strong commitment to their faith, there was no question that a pastor would be attracted and made welcome. This pastor, after all, was arguably the most rooted in Puritan values of any citizen in the community. The meeting house, by intent and reality was the most essential building in the town.

There was also little question concerning the need to attract a village or town blacksmith. Most often located in the proximity of the meeting house, the blacksmith represented manufacturing at its most

[19] Sumner Chase Powell, *Puritan Village: The Formation of a New England Town* (Middletown, CT, 1963), pp. 77ff; Helen Fitch Emory, *The Puritan Village Evolves*, pp. 2ff.

[20] Stephen Innes, *Labor in a New Land: Economy and Society in Seventeenth Century Springfield, Massachusetts* (Princeton, NJ, 1983), pp. 6–10.

[21] Richard Wilkie and Jack Tager, eds, *Historic Atlas of Massachusetts* (Amherst: University of Massachusetts Press, 1991), p. 17.

[22] Edward Johnson, *The Wonder-Working Providence of Sion's Saviour in New England* (New York, 1959), pp. 212–16.

[23] Sylvia Doughty Fries, *The Urban Idea in Colonial America* (Philadelphia, 1977), p. 48.

[24] T. H. Breen, *Puritans and Adventurers* (New York, 1980), pp. 16ff.

[25] Winthrop, *Winthrop's Journal*, vol. 1, p. 103; Edward Pierce Hamilton, 'The New England mill village', *Old Time New England*, LXII:2 (October–December 1951), 29–38 (p. 30).

basic. This person touched virtually every family in the town.[26] An examination of the accounting records of William and John Pynchon, leaders of the town of Springfield, clearly illustrate this point.[27] Perhaps most importantly, in terms of town planning, the presence of a busy blacksmith shop co-located with the meeting house and tavern (or ordinary) often attracted other artisans and small merchants and travellers, to the area. Given that most of the Puritans lived close to the centre, and were called to compulsory lectures and sermons during the week and Sundays, it was the only time the entire town gathered together in one place. The meeting house was also the centre for municipal meetings, and this mixture of business activity, spiritual meetings and town affairs contributed to a sense of both vitality and unity among the townspeople. This was quickly realised, for example, in the town of Salem where, very soon after providing a plot for a blacksmith, a town meeting was called to discuss what other shops should be cited nearby. What's more, it caught the attention of the general Court who then issued a set of expectations concerning innkeepers, horse stables and taverns.[28]

Collectively, the Puritan socio-spatial practices formed what urban planning professor Lawrence Vale called a 'moral geography': spirituality, religious instruction, commerce, socialisation and even military defence functions all took place under judgeful watching eyes.[29] It could be observed in practice quite vividly as citizens at the town level regulated a significant amount of manufacturing ranging from weights and measures (the blacksmith) to monitoring the scales to determine accuracy in the measurement of grain (the grist mill operator) and selecting the location of forest lands to be cut (the sawmill operator).[30]

The sawmill operator, unlike the smith, had to work outside the village, often several miles distant, where the trees could be found and cut.[31] As such he was unable to regularly participate in the religious, civic and social activities of the community and thus significantly separated himself from the spiritual and civic life of the community. Consider the case in the town of Newbury where its millers, John Spencer and William Dummer, rejected the common tenets of Puritan doctrine and became followers of Antinomian beliefs. After being charged with heresy, they fled to England in fear for their lives. After Spencer died of natural causes, Dummer returned to Rowley a year later, recanted his beliefs and returned to operate his mill.[32] The role of the sawmill was also profound in terms of ideological symbolism, culture and pragmatic community development. In an ideological sense, the Puritans were, to a degree, embarking on a holy mission in the wilderness. One of their charges was to conquer nature and ensure that it was put to the service of God and the community. The forest in an iconic sense, represented the wilderness that housed the untamed, the unknown and the feared. It represented

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[26] Edwin Tunis, *Colonial Craftsmen and the Beginning of American Industry* (Baltimore, 1965), p. 19.

[27] Innes, *Labor in a New Land*, pp. 229–36. Note the 'Blacksmithing' category of expenditures is consolidated in William Pynchon's Record of Accounts with Early Settlers and Indians, 1645–1650 and John Pynchon's Account Books 1652–1702.

[28] *Record of Salem, 1634–1650,* Essex Institute Historic Collection, 6th February 1635 (Salem, 1868), p. 9. Also see Nathaniel Ward, *The Book of General Laws and Liberties Concerning the Inhabitants of the Massachusetts Bay Colony* (Cambridge, MA, 1929), para. 30.

[29] Lawrence S. Vale, *From the Puritans to the Projects: Public Housing and Public Neighbors* (Cambridge, MA, 2000), p. 24.

[30] Alfred S. Hudson, *History of Sudbury, Massachusetts* (Sudbury, 1889), p. 97; Benjamin P. Mighill and George B. Blodgette, *Early Records of Rowley, Massachusetts, 1639–1860* (Rowley, 1894), p. 92.

[31] John Stilgoe, *Common Landscapes of America, 1580–1845* (New Haven, CT, 1982), p. 312.

[32] John Currier, *The Record and History of Newbury, 1635–1902* (Boston, 1902), p. 38.

something that had to be conquered or at least controlled.[33] In a cultural sense, the Puritans brought with them a sense an affinity for open spaces. Thus, to move into a new environment where the deep and dark forest extended as far as eyes could see was indeed a novel experience.[34] In a pragmatic sense, it was a fearful place: the forest was thought to hide Native Americans and housed dangerous animals of all types. The Native Americans, while mostly peaceful, were never quite trusted and alarms associated with potential attacks were frequent and stories of dangerous animals coming out of the woods to roam the streets of towns and villages in the 1630s were plentiful.[35] Geographer Yi Fu Tuan explained this context of the village and farm on one side and the forest on the other quite clearly: if one treated the village and farm as haven, as the Puritans did, then there must be a non-haven.[36] This consisted of the fearful and seemingly endless New England woods.

The sawmill in terms of the evolution of early New England manufacturing community was quite important. The operators cleared land that could be put into agricultural production and provided a stronger degree of security due to increased cleared land around the village. They also provided by-employment for farmers during slack times.[37] As a farmer learned to cut and refine wood, understand machinery and learned new manufacturing processes, he began the long evolution towards becoming a 'maker of things', and added economic value to his community. This miller had a direct impact on the built environment in the local community for his products enabled his neighbours to build their homes more substantially. Using the case of the town of Amesbury as an example, the settlers no longer had to use rough-cut logs but could now construct with boarded frames.[38] This operator, along with the blacksmith and foundryman, formed key links in the creation of the region's shipbuilding cluster, which required both wood and iron as basic construction materials. These artisans, were increasingly able to shape, refine and mould these materials with such skill that Boston's ships were equal to those built in Europe throughout the seventeenth century. Moreover, they had such a ready supply of wood that boards and planks were commonly exported to other colonies, the West Indies and Europe.[39] The sawmill operator, in short, expanded the supply of plowable land, helped to keep fearsome animals at a distance, provided the means to build more permanent domiciles, created increased by-employment opportunities and was a key participant in stimulating economic development in the Colony.

For all the good that was provided by sawmillers one must also recognise their downsides. They were changing the landscape and at times, negatively impacting agricultural production by causing extensive soil erosion. In Salem, for example, by 1636, the town no longer had any standing forest lands with quality timber.[40] The net results of their actions caused the towns to increasingly limit tree cutting to the point these millers had to establish themselves well away from established communities.[41]

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[33] Cecelia Tichi, *New World, New Earth: Environmental Reform in American Literature from the Puritans through Whitman* (New Haven, CT, 1979), p. 21.

[34] David Hackett Fischer, *Albion's Seed: Four British Folkways in America* (New York, 1989), pp. 42–3.

[35] Charles F. Carroll, *The Timber Economy of New England* (Providence, RI, 1974), p. 60.

[36] Yi Fu Tuan, *Landscapes of Fear* (New York, 1979), p. 6.

[37] Benno M. Forman, 'Mill sawing in seventeenth-century Massachusetts', *Old Time New England*, LX: 4 (spring 1970), 110–30 (p. 117).

[38] Joseph Merrill, *History of Amesbury Massachusetts* (Haverhill, MA, 1880), p. 10.

[39] Daniel Vickers, *Farmers and Fishermen: Two Centuries of Work in Essex County, Massachusetts, 1630–1850* (Chapel Hill, NC, 1994), p. 262.

[40] *Record of Salem*, p. 10.

[41] Mighill and Blodgette, *Early Records of the Town of Rowley*, p. 92.

The grain miller, since medieval times, had a history of being kept at arm's length and not being wholly welcomed into the community.[42] Consider the folk saying, 'a miller never goes to heaven' or 'marry a miller, marry a thief'.[43] This sense of not being quite part of the community was just as common among the first generation of millers in New England as it was in Old England. There may even have been some truth to their reactions for the grist mills tended to attract workers who were the 'poorer sort of people'.[44] For example, in 1639 alone, the Court charged three millers for the crime of over tolling.[45] In Concord, the miller, known for his rascalities, was charged with illegally heightening the mill dam for his own profit to the point it caused a flood and environmental damage.[46] Given the potential for the miller to contribute to cultural disharmony and the community's concern over fair pricing, one can easily understand why the Puritan leaders were very careful in welcoming him into the community and kept a careful eye on his activities.

Typically, after gaining approval to plan a new town, the community leaders would seek out a miller from England or another colony town. This, in itself, was no easy task for there were few skilled millers available in the Colony. The absence of a grain mill would mean the settlers would have to carry their grain to often distant towns for milling, grind it by hand or by the use of livestock thus creating hardship. If fortunate, as in the case of Ipswich, the towns would be able to find grain millers quite quickly.[47] Other towns were less successful for there were few skilled millers available in the Colony. Consider the citizens of the town of Watertown: With poor yields of corn and the absence of a miller, the town's ability to feed itself was 'dauntingly laborious' and resulted in human suffering.[48] In the town of Roxbury, due to a poor access road to a mill, the General Court ordered the town to upgrade a connecting road to one in the nearby town of Dorchester.[49] After scrutinising the proposed miller, the selectmen would either vote themselves or submit his name for approval to town meeting. If approved, they would provide him a grant of land, establish the rates at which he would be paid, and at times, help to finance the construction of the mill and ensure road access to it. For example, one Thomas Cakebread left England with the Winthrop fleet and became a miller in Watertown. After Sudbury was hived from Watertown he agreed to join the new community as its miller in exchange for the enticement of forty acres of upland next to the mill and forty acres of meadowland.[50]

The toll paid to the miller, called a 'pottle', was typically set between one-fifth and one-quarter of the grain brought to the mill. Each farmer carefully watched how this was calculated. The Puritans called the amount agreed upon 'a just price'; the amount a reasonable person would pay.[51] Given that the technical, mechanical and mathematical skills of the miller were frequently well beyond the knowledge base of most farmers, one can understand why there was a bit of mystery over the miller and his operations. Consider the miller had to monitor the density and content of grain, master the workings of complicated machinery, insure the shafts and gears were safe and functioning and oversee the

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[42] Lotte Motz, *The Wise One of the Mountain: Form, Function, and Significance of the Subterranean Smith: A Study in Folklore* (Kümmerle Verlag, 1983), pp. 1–4.

[43] Theodore R. Hazen, 'Sayings From the Mill', <http://www.angelfire.com/journal/millrestoration/sayings/html> [17th April 2017].

[44] Carl Bridenbaugh, *Cities in the Wilderness: The First Century of Urban Life in America* (New York, 1966), p. 35.

[45] Shurtleff, ed., *Records of Massachusetts Bay*, p. 223.

[46] Townsend Scudder, *Concord: America's Town* (Boston, 1947), p. 5.

[47] *Ancient Records of the Town of Ipswich, 1634–1650* (Ipswich, 1899), p. 4.

[48] Roger Thompson, *Divided We Stand: Watertown, Massachusetts, 1630–1680* (Amherst, 2001), pp. 84, 225.

[49] Charles M. Ellis, *The History of Roxbury Town* (Boston, 1847), p. 138.

[50] Hudson, *The History of Sudbury, Massachusetts*, p. 97.

[51] Bernard Bailyn, *The New England Merchants in the Seventeenth Century* (New York, 1964), p. 21.

operations of the dam and waterworks.[52] With an inability to understand most of these activities and with frequent frustration over price fluctuations and the actual amount of grain kept by him, the settlers were ready to attribute their problem to human malevolence. Alas at times he was intensely disliked and even mocked. At other times the millers themselves added to this sense of being apart by carefully controlling their technical knowledge. As Bailyn noted, the settlers, while predisposed to consider middlemen such as grain millers as parasites, were totally dependent upon them for their goods and equipment.[53] By so doing, millers guaranteed themselves a special status and ensured themselves that there was little likelihood of local competition.

The miller was a risk taker. A Puritan settler was granted land by his neighbours and a community-based social network that would provide help to him in times of distress. If the farmer and his family were upstanding, hardworking and religiously active in the community, there were relatively few worries concerning survivability due to a strong support network. In comparison, the mill operator came with minimal social support, took a portion of the results of the farmers' work as pay, had a set of skills that were mysteries to most Puritan settlers and relied on the townspeople to purchase equipment and tools for his operations. Finally, consider the risk of fire: early mills were firetraps: if the weather was dry and hot for an extended time, the mill was at peak use (and full of dust) and, if the grease on joints evaporated, then the potential for spontaneous explosion was high and quite commonly occurred. Stories of the death of mill operators due to floods, heat, explosions or accidental crushing could be heard regularly throughout the Colony.[54] Given the hardship and pain that was common to a miller's life, one readily understood the folk adage 'he's been through the mill'. In some communities, when a miller died as a result of a 'crushing' accident, it was common to mark his grave with the millstone that contributed to his demise. This was not intended as a sign of respect so much as it was believed that the millstone was considered unlucky.[55]

The sense of psychological, social and spatial distance that frequently occurred between townspeople and millers carried over into the economic realm where it could be vividly noted in terms of who worked in the mill. In the first generation of Puritan settlement (1630–60) it would have been rare for any landed Puritan settler to switch his occupation from farming to any manufacturing activity for the desire to work and own the land was fundamental to their lives. A settler may seek temporary by-employment at the mill to gain extra income but he had, on the whole, little interest in working in such an establishment on a fulltime basis.[56] It was not a place where a parent would send a member of their family to work in such a place as there was a shortage of farm labourers. Indeed, the Puritan household was just as much a small factory as it was a domicile. Most notably, the role of the mother and daughters in spinning and weaving and maintaining the kitchen garden were critical aspects in terms of daily life.[57] One could see the importance of the home as factory by the fact the General Court passed legislation during the extreme cloth shortage of the 1840s, requiring households to become skilled in textile production and to produce a certain quota of cloth based on the skills of family members including children.[58] As a result, however, there were even fewer potential mill workers. Consider that

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[52] Innes, *Labor in a New Land*, p. 83.

[53] Bailyn, *The New England Merchants*, p. 43.

[54] Hamilton, 'The New England mill village', pp. 34–5.

[55] Martha Zimiles and Murray Zimiles, *Early American Mills* (New York, 1972), p. 7.

[56] Richard L. Bushman, *From the Puritans to Yankee: Character and Social Order in Connecticut, 1690–1765* (Cambridge, MA, 1967), pp. 41–2.

[57] Douglas R. McMannis, *Colonial New England: A Historical Geography* (London, 1975), p. 93.

[58] Shurtleff, ed., *Records of Massachusetts Bay*, vol. 2, p. 105; vol. 3, p. 396.

Scottish prisoners captured by Cromwell's forces at the battle of Dunbar were shipped to the Colony where many were indentured to millers in Dover, Dedham, Springfield, Lynn and Berwick. One of the workers, a John Stewart, ultimately became the town grain miller in Springfield and proved so successful that town meeting members voted to give him the mill in perpetuity.[59] It is quite clear, in the first generation, if a Puritan settler had to work in the mill there was a loss of community respect, social rank and grace.[60] In such a climate one could readily understand why millers had to attract workers who were strangers and outside the mainstream of Puritan life. By so doing, they played a critical role in diluting the solidarity, cultural bonds and unity of the community. Both the millers and their outside workers were accepted far more due to their utility than their holiness or willingness to embrace Puritan norms.

The act of the Court had the unintended consequence of stimulating the towns to attract weavers from across the Colony. These weavers, over time, often formed fulling mills where rough cloth was transformed into highly wearable and comfortable cloth. The impact could be seen in the town of Rowley where, in 1642, one John Pearson created a fulling mill and then added a sawmill, a grist mill and ultimately two more fulling mills to the point the site became the largest multi-mill complex in the Colony. As the flocks of sheep expanded, the settlers became more skilled in weaving, more cloth was produced and many millers added capacity to handle fulling operations. Indeed, this linkage became common place.[61]

The miller was certainly in a unique position. All classes in the Puritan community from selectmen to clergy to the newest farmer required his services for he was the transformer of grain. Because of his skill in developing materials that could be made into products, he was a circulator of wealth. And because he had no competition, despite distrust, all members of the community were forced to have a working relationship with him. Consider the meaning of another folk saying, 'Don't drown the miller'. One can surmise that the proverb means that even though he may not be a true member of the community, there were dire consequences if he left the community.[62] He was a vital community sustaining asset. It is clear that the miller was needed more than wanted, and like the hired hand who was not quite family, the miller was a bit 'beyond the pale'.

In terms of design there was a sense of form following function in the massing of the mill structure. Simple and clear of ornamentation, the massing and roof were simply a protective outer skin for the set of machines that protected the machinery. The silhouette of the structure, depending upon the vista, was alternately integrated into the landscape or somewhat statuesque. From roadside, the mill blended with other structures in the community. Many of them had characteristics common to the early New England barn. But on waterside, one could note the waterwheel and powerful grinding mechanisms, the

[59] Christopher Gerard, Pam Graves, Andrew Millard, Richard Annis and Anwen Caffell, *Lost Lives, New Voices: Unlocking the Stories of the Scottish Soldiers from the Battle of Dunbar, 1650* (Oxford, 2018), p. 205; Massachusetts Historical Society, *Scotch Prisoners Deported to New England by Cromwell, 1651–1652* (Boston, 1900), pp. 1–19. Also see Henry Burt, ed., *The First Century of the History of Springfield: The Official Records from 1636–1736* (Springfield, 1898–9), vol. 1, pp. 216–17, 252–3.
[60] Barry Levy, *Town Born: The Political Economy of New England from its Founding to the Revolution* (Philadelphia, 2009), p. 145. Also see Mighill and Blodgett, *Early Settlers of Rowley, Massachusetts*, pp. 272–3.
[61] Victor S. Clark, *History of Manufactures in the United States, 1607–1860* (London, 1929), p. 180.
[62] Hazen, 'Sayings From the Mill'.

dam and other parts of the production process. Arguably, they were, after the meeting house, the most imposing structures in the town.

The optimal site of the mill would have been along a stream on a parcel of land undisturbed by logging activities or cultivation. Lush tree covered landscapes served as windbreaks and natural cover preventing sunlight from evaporating the water in the mill pond while the natural landscape helped to retain water and stop flash flooding. Such sites were typically far from town centres. The size of the mill was often dictated by the power provided by the stream. Thus, the mill had to respect the site's natural qualities. A similar statement could be made concerning the mill dam. This structure was frequently a reinforced beaver dam that had been built up over the years. The community would use the top of the dam as a bridge with the intent of compacting the structure and minimising water seepage. Often the community would add more wood stumps and stone to further strengthen the holding capacity. Under normal conditions, the mill pond was designed to hold a day's worth of production plus enough to drive special machines. The merging and interconnectedness of the mill, dam, pond, headrace, tailrace and service roads defined the basic mill. Above all, the builders of these mills, through a careful articulation of how these elements fit into the landscape, contributed immeasurably to the character of the Puritan townscape.[63]

In a spatial-cultural context the meeting house and the mill were nodes representing a major conundrum in Puritan life. The meeting house was the epicentre of religious life. It was a place of moral judgement and penance where all Puritans were expected to come together to reinforce their spiritual commitment to the tenets of Puritan life. In the early years of Puritan settlement, it was, in an iconographic sense, the symbol for the reason why they came to the New World. One entered through its door for spiritual sustenance, to strengthen community bonds and even to be protected from the fearful elements surrounding them. And in a physical sense, all roads were constructed in a manner that would connect to it. When the town was in its early stages of development there was no question that it was the centre of community life.

Very gradually, however, the presence of the mills began to introduce powerful secular influences on Puritan life that would go on for decades. While one needed to be spiritually nurtured, one also needed to have daily sustenance and even one's daily bread. One came to the New World not only because of religious reasons but to create an opportunity for a higher quality of life. And one came not only to live in the moment but they needed to ensure that offspring would be able to prosper in the future. To accomplish this, one needed productive land and one needed millers. As these millers came, they created areas of economic space where the words of ministers had to be muted. They were the enablers of a degree of secularisation. Moreover, for reasons of technology, nature and geography, the mill and the miller had to be governed by pragmatism. Simply put, the needed grain miller had to be placed where there was a stream, a dam and a pool. Similarly, if the town wished to have wood to heat their homes, to build their community, or to expand the availability of land for farming, then the sawmill had to locate in or near the wilderness. In both cases, given their lack of knowledge of milling, the Puritans recognised a need to accept non-Puritans into their towns in order to function. However, at least initially, they were treated as contract workers and were hardly embraced by the Puritan closed and covenanted community. This, over time, changed as the miller became increasingly intermeshed within the community, expanded his business, obtained land and, in many instances, became quite profitable.[64]

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[63] Zimiles and Zimiles, *Early American Mills*, p. 110.
[64] Edward J. Perkins, *The Economy of Colonial America* (New York, 1988), p. 48.

The spatial structure of the town also began to shift with the coming of the mills. Using the idealised six-by-six square mile concept found in the 1635 guide as a model, it initially called for the development of a nucleated village centring on the meeting house surrounded by densely placed dwellings and common lands. As the town grew and large parcels were allocated along with freehold lots, the density was lowered, distances between the nucleated village and the allocated lands lengthened, and small hamlets were formed. And, with an increase in farms came a further demand for milling services, which were commonly well outside the core of its community. Moreover, many of the millers were astute businessmen who were well aware of the market economy and, given the fact that the farmers often had to wait ('milling around') as their corn or wheat were being ground, the miller knew he had a captive audience. Taking advantage of this, it was common for millers to become tradesmen opening stores in the mill and exchanging surplus grain, meal or flour for goods. The mill frequently became a centre of business networking.[65] In short, the settler's interests were being increasingly shared between 'mill and meeting' with the net result that the sense of a spiritually centred town was weakened and the town more dispersed.[66]

Conclusion

We began this article with the statement that we believed the role and place of blacksmith shops, sawmills and grain mills and their operators were significant in the formation, and evolution of the Puritan town. Our findings conclude that this was the case. They were all instrumental in community building. The smith provided a stimulus to the creation of a commercial component in the town centre by locating near the meeting house. Indeed, once established, coopers, taverns, tanners and commercial stables soon followed. The sawmill owners, by clearing the land and providing winter employment, helped the town to have space in which to expand farming and grazing opportunities and creating additional housing plots. These cleared lands also created a buffer between the settlers and the forests with the net effect of increasing a sense of security. The sawmill sites, by their location, orientated towards single minded production, and the placement on cleared sites were, in essence, precursors to the New England mill villages and towns of the early nineteenth century.[67] Indeed, such was the case in Dedham where the residents of its sawmill district petitioned to hive off and form a new plantation on the grounds of cultural differences and poor access to a meeting house and the town centre.[68] In short, as Stilgoe opined, 'sawmills civilized the land'.[69]

The grain mill by its distant location from the meeting house often became a commercial anchor and a competing node to the town centre. This was particularly the case as roads improved, private dwellings were allowed in the former reserved areas and the millers, ever vigilant for business opportunities, added food and needed goods for sale. In essence, the town centre, as the location of things spiritual and things civic, were places of serious thought and decision making. The emerging mill node was a vital, noisy place of excitement, entrepreneurship and trade. In a comprehensive sense, while the meeting

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[65] Stilgoe, *Common Landscapes*, p. 308; McMannis, *Colonial New England*, p. 60.

[66] Ellis, *The History of Roxbury Town*, p. 138. Also see Blanche Evans Hazard, *The Organization of the Boot and Shoe Industry before 1875* (Cambridge, MA, 1920), p. 16 and Richard W. Judd, *Second Nature: An Environmental History of New England* (Amherst, MA, 2014), pp. 72–3.

[67] Richard M. Candee, 'Merchant and millwright: the water powered sawmills of the Piscataqua', *Old Time New England*, 15: 4 (spring 1970), 131–49 (p. 316).

[68] Kenneth A. Lockridge, *A New England Town: The First Hundred Years, 1636–1736* (New York, 1970), pp. 97–9.

[69] Stilgoe, *Common Landscapes*, p. 308; McMannis, *Colonial New England*, p. 316.

house, dwellings, and farmlands provided the physical foundation for the town, the smiths and mills contributed immeasurably to its vitality, form, growth, security and prosperity.