

Report: Blackstone River Valley Special Resource Study

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Question 1: how do historians currently understand or define the Industrial Revolution in the United States?

The term “industrial revolution” no longer is used by most scholars because research has demonstrated that the rise of manufacturing constituted a complex process which unfolded over a long time span. It is not possible to identify a sharp break which could be called revolutionary. The debate about exactly when workshop and factory manufacturing developed out of craftshops or home manufacturing is interesting, but precise timing varied by country and world region. Having said that, this does not mean that no major transformations in manufacturing occurred. Quite the contrary. Manufacturing went through dramatic changes when viewed over the perspective of one or more decades, albeit often with a base being laid over a longer period prior to what is seen as dramatic change.

The term industrialization is commonly used now to indicate the broad process of manufacturing change which encompassed technology, work organization, wage labor, gender roles, transportation, finance, and trade. When scholars study manufacturing they typically examine one or more of these aspects as they relate to industry. Most of the labor force worked in agriculture before and during industrialization; therefore, the link between agriculture and manufacturing is a key relation that scholars have aimed to understand.

Popular and scholarly misconceptions of nineteenth century manufacturing abound. One of the most common misconceptions is that industrialization consisted of a transition from agriculture to manufacturing. The decline in the share of the labor force in agriculture and the rise of the share in manufacturing often is cited as proof of this transition. While this sectoral change in the labor force shares occurred, in fact agriculture continued to expand in aggregate value of output. Equally, if not more significant, prosperous agriculture in the first half of the nineteenth century provided both important demand for manufactures and surplus capital to invest in manufactures. The expansion of this agriculture also generated demand for many services which urban firms supplied, and these firms provided additional surplus capital to invest in industry. Merchant wholesalers in the metropolises (such as Providence and Boston) organized the trade of the region and mobilized capital for investment in manufacturing.

Another misconception follows the line of argument which portrays manufacturing as evolving from craftshops to small workshops to small factories to large-scale, mass production factories. In fact, as of the late nineteenth century all of these manufacturing approaches continued to operate, and the large-scale, mass production factories existed in only a few industries. Therefore, to understand industrialization it is important to examine the organization of production, technology, markets, and so on. These variables impacted the type of manufacturing which developed and persisted in each industrial sector, and a given sector could have various types of manufacturing approaches operating simultaneously.

Machinists comprised one of the most significant set of industrial workers in the nineteenth century because their skills were essential to the pivotal producer durables—metal fabricating, machinery, and machine tools. These manufactures provided the intermediate goods which industrial firms in most sectors relied on to turn out their products. These machinists

operated in networks within each industrial region, and they moved among regions, such as from eastern Massachusetts or Rhode Island to the Philadelphia region. They shared knowledge of machine work, and this sharing and job mobility of these machinists contributed both to the significant technological advances in the pivotal producer durables and to the overall industrial expansion of the nineteenth century.

Question 2a: What important themes in American history are represented in the Blackstone Valley?

The Blackstone Valley constitutes the best, still intact, representation of the key themes of industrialization during the nineteenth century of any similar sized territory in the United States. It participated fully as a major powerhouse of industrialization throughout the century across a range of significant industries including one of the most important, the textile industry, as well as a large set of the pivotal producer durables of metal fabricating, machinery, and machine tools. A sizable share of this extensive rural and industrial landscape which had emerged by 1900 remains intact. Slow to moderate growth rate after 1900 reduced pressures to tear down industrial buildings and to convert farmland into suburban developments.

Providence is a small metropolis whose merchants organized the trade of agricultural products, the provision of goods to the Blackstone Valley's consumers, and handled the redistribution of some of the industrial products. Even more significantly, these merchants invested their own capital in manufacturing, as well as mobilizing capital from other investors in the Valley to invest in industry. This merchant wholesaling and industrial investment theme was repeated throughout the northeastern United States in the nineteenth century.

The link between agriculture and industry was a key part of the growth of the Blackstone Valley. It did not have large farms on flat land as appeared in the Connecticut Valley, New York

state, or in the Midwest. Nonetheless, the Valley contained many small, prosperous farms which produced surplus farm goods for Providence and other small urban places in the lower part of the Valley and farm goods for Worcester in the upper part of the Valley. As factories emerged these farms supplied high value commodities such as vegetables, dairy products, and meat for the factory workers.

The Blackstone Valley surged into the lead as the first major textile production area in the United States in the nineteenth century. The 1793 start of Slater's Mill in Pawtucket signaled the rise of the Blackstone Valley to prominence, but it was not the first cotton mill. Others had developed in the Boston area, the Hudson Valley, New Jersey, and in the Philadelphia Region. The difference in Rhode Island was that the Brown family of merchants who funded Samuel Slater's mill had hired a technologically proficient machinist. The Pawtucket mill, and several others founded by the Brown family merchants, sometimes in cooperation with other Providence area merchants, became magnets for talented machinists who wanted to expand their knowledge of machine-building skills under the tutelage of Slater and of his early trainees. Slater's direct and indirect trainees went on to set up textile machinery in other cotton mills in the Blackstone Valley. These trainees also moved elsewhere in New England to nearby Massachusetts, to southern New Hampshire and to the Quinebaug Valley of eastern Connecticut. They also went to New York state, especially the Hudson Valley and the Mohawk River Valley, including as far west as Utica.

This textile mill development in the Blackstone Valley generated an industrial landscape of mill villages with workers housing near the mill. Initially the workforce comprised families—fathers, mothers, and children. As the small factories were enlarged and new, much larger factories were constructed the family organization of labor declined. By the mid-nineteenth

century immigrant male and female laborers were working in the mills, though the mill housing remained. This pattern of mill village and nearby workers' housing came to characterize the Valley all the way through the nineteenth century. As textile production continued to expand some mill complexes such as in Providence, Pawtucket, and Woonsocket merged together and became inseparable parts of an industrial city. In these cities factories often clustered near waterpower, although steam power became dominant after 1850. Large amounts of workers' housing were built nearby, but they did not resemble the mill villages located along rivers and surrounded by farms and woods.

The Blackstone Valley textile mills differed from the big mill complexes developed by the Boston merchant elite and their fellow investors. That group focused on building huge mill complexes at individual sites, starting with the Boston Manufacturing Company at Waltham (Massachusetts) in 1813 and then the great Lowell project in the early 1820s. Subsequently other mill complexes were developed at Chicopee in Massachusetts, at Dover, Manchester, and Nashua in New Hampshire, and at Saco in Maine.

The early emergence of many skilled textile machinists in the Blackstone Valley, along with the other metal workers in small iron foundries, set the foundation of the iron foundry and steam engine shops, textile machinery firms, general machinery firms, and machine tool firms which became integral parts of the industrialization of the Valley throughout the nineteenth century. The leading machinists in these firms were integrated into larger machinist networks in the eastern United States. Besides the migration of Slater trained textile machinists throughout New England and New York state, top machinists from the Blackstone Valley went to Lowell, to Paterson (New Jersey), and to Philadelphia, among other places. Equally as important, the many top machine shops, machinery firms, and iron foundries and steam engine shops were magnets

for machinists from elsewhere in New England, New York, New Jersey, Pennsylvania, Maryland, and Delaware.

The Blackstone Valley from Providence to Worcester constituted one of the leading machine shop, machinery, and machine tools complexes in the nation. Famous firms included the Corliss Works, the Providence Tool Works, and Brown and Sharpe in Providence, the Whitin Machine Shop in Whitinsville (Massachusetts), the Draper Works in Hopedale (Massachusetts), and the Crompton Works and the Pond Machine Tool Company in Worcester. Thus the Blackstone Valley has a rich legacy of nineteenth century industrialization. Its highly innovative firms possessed ties to many of the prominent industrial firms that emerged elsewhere in the nation.

Question 2b: During what period(s) were these themes represented in the Blackstone Valley to a significant degree?

The Blackstone Valley participates from the start of the new nation with the industrial expansion of the 1790s, which carried through the early textile mill development up to 1820. The textile mill village phenomenon continued to occur during the antebellum, thus giving the Valley many mill villages. These villages continued to be the sites of the late nineteenth century industrial expansion. The machine shop, machinery firms, and iron foundries developed throughout the Valley from the 1790s to 1860, and the large clusters of these firms, building on earlier firms, emerged in Providence and Worcester after 1860. Firms which made machine tools expanded especially after 1850 and continuing to 1900, although few firms could be said to be specialized in that equipment. The Blackstone Valley thus is a living museum of nineteenth century industrialization.

Question 3: Given the history and integrity of the BRV, should our resource evaluation focus on individual sites, an accumulation of sites, or the landscape as a whole?

My recommendation is to define the National Park as approximately the territory of the Blackstone River Valley National Heritage Corridor from Worcester in the north to Pawtucket in the south, and add on Providence and East Providence. This area from Providence to Worcester is coherent in terms of telling the story of industrialization in the nineteenth century. The following are the set of sites which I believe are most compelling in forming the basis of the national park. There may be some which I have missed, but this set seems to me to be especially worthy of inclusion as individual sites.

Providence, R.I.:

Selected buildings in downtown Providence reflect the city's position as a small metropolis which housed the key merchant wholesalers, and later, financiers such as bankers who were important to funding industrialization of the Blackstone Valley. The College Hill area includes many intact mansions of the wealthy Providence elite including the Corliss mansion, the Brown family mansion, and many others. Several machinery firm buildings still remain such as the Brown and Sharpe factory complex. Also clusters of old textile mill buildings and workers housing are present in Olneyville.

Pawtucket, R.I.:

The Slater's Mill Historic Site is a treasure that needs to be supported. It tells the early story of industrialization of the Blackstone Valley, and the wonderful waterpower, dam, mill, and stream area is a priceless setting. Pawtucket's clusters of large mill buildings and the many workers housing, often two- and three-decker housing, offer a great example of late nineteenth century textile city landscapes.

Ashton, R.I.:

The mill and workers housing here is an excellent portrayal of the late nineteenth century mill village. The Blackstone River, Blackstone Canal, and Providence and Worcester Railroad line can be observed, so one sees the juxtaposition of these elements of the industrial landscape. The small museum provides an additional feature, which if supported more could add a nice stopover for tourists. The fact that the mill has been renovated for housing means that its preservation is assured for the short to medium term.

Lincoln, R.I., Great Road:

The driving tour of the Great Road historic district is a treasure of existing structures which portray the 1790-1900 period of Rhode Island industrialization. The Great Road itself was a wagon road to Providence, and it certainly was used by prosperous farmers in the area to send their vegetables, dairy products, and meat to Providence. Thus it exemplifies this integration of prosperous farms and small metropolis that characterized the nineteenth century. The Moffett Mill housed one of the early small machine shops, so it exemplifies the many small machine shops that proliferated in Rhode Island.

Slatersville, North Smithfield, R.I.:

This is a spectacular example of one of the nation's earliest planned industrial villages. Samuel Slater's brother John, who, along with Samuel, is an excellent example of an immigrant textile machinist, carried out much of the basic work of identifying and planning the site. The co-investors, Samuel Slater, along with Almy and Brown who were involved with the original Slater's Mill, as well as several other major textile mills in the Blackstone Valley and in New York state, bring together some of the leading figures in American industrialization. The set of mills, the dam, the mill pond, and the village

provide an extraordinary setting for demonstrating these significant features of nineteenth (and early twentieth) century industrialization.

Woonsocket, R.I.:

This industrial city formed from a collection of mill villages (Woonsocket Falls, Globe, Social, Bernon, Hamlet, and Jenksville) is a wonderful site for seeing the full panoply of nineteenth century industrialization, especially the latter part of the century when the mills became larger and immigrant labor, especially French-Canadian, came to work in the mills. The Providence and Worcester Railroad, the Blackstone River, and the various side canals for moving water to mills provides a nice setting to see the juxtaposition of these elements of industrialization. The late nineteenth and early twentieth century commercial buildings also reveal the character of successful manufacturing of that era, just prior to the decline. The Museum of Work and Culture has already done a fine job of bringing together the local history. The National Park Service can provide the overarching support to keep the museum viable for the future.

Hopedale, Mass.:

The planned industrial community of Hopedale is one of the nation's finest intact examples of that pattern of industrial development measured by its large scale, the national significance of the E. D. and G. Draper Company, and the longevity of the factory community. The entire panoply of mill pond, dam, huge factory, workers housing, management housing, and community facilities remain for all to enjoy. The Draper influence is everywhere, which brings out their integration and dominance of the community.

Whitinsville, Northbridge, Mass.:

The town of Whitinsville, with all the public buildings and commercial buildings provides a fine setting for what a small factory city looked like, at least one dominated by a large firm. Still, the massive factory complex of the Whitin Machine Works and the huge amount of workers housing nearby is a treasure to be preserved. This complex retains the entire history of the Whitin Machine Works from the 1826 machine shop to the granite cotton mill of the Whitin family (they continued to own cotton mills, even as they focused on textile machinery) to the large factory which became one of the biggest textile machinery works (it was built in 1847) of the mid-nineteenth century. The Whitin Machine Works continued throughout the nineteenth century to be one of the nation's premier textile machinery firms. Later additions made it the massive complex it is today. The preservation of some of the buildings through the nonprofit organization, Alternatives (Community Life for People with Disabilities), along with the development of the large complex as a site for various manufacturing firms by an industrial management company offers a unique opportunity for partnering to maintain this setting.

Sutton, Mass.:

The town center and the farms nearby are a wonderful example of prosperous farmers who supplied dairy products, meat, and hay to urban centers, including Worcester and Boston. The walking tour highlights some of this prosperity. Maintenance of one or two farms as open space, with the farm buildings and such, along with some woodland might make a nice state park that could be incorporated into the national park.

Blackstone, Mass.:

The Daniels Farmstead Foundation, which aims to preserve one of the large, prosperous farms dating back at least to the nineteenth century might be a treasure to support.

Perhaps a collaboration between the National Park Service and the Daniels Farmstead Foundation might be a way to maintain this treasure for the future. It would then be a full scale farm example of prosperous agriculture that supported industrial development and whose continued prosperity was made possible by the urban-industrial markets of this part of Massachusetts.

Worcester, Mass.:

This industrial city and nearby satellites should be incorporated into the national park. It is one of the most important industrial cities of the nineteenth century, primarily because of its prominent machinery and machine tool firms. A large set of the nation's famous firms in these sectors operated from Worcester. The many industrial buildings remaining, along with the extensive downtown, exemplify the prosperity of a great industrial city.

IN SUM:

The Blackstone River Valley National Heritage Corridor already has identified and developed tourist concepts for many of the finest examples of nineteenth century industrialization. Incorporating these into the National Park would be a way to institutionalize and protect these fine sites for the long term enjoyment of Americans and foreign visitors. The immense richness and density of sites within a distance of 45 miles between Providence and Worcester is not equaled anywhere else in the United States.

The National Park encompassing these sites would meet all of the criteria of national significance for being a National Park:

[1] The sites within this territory are without peer as arguably the most outstanding collection of nineteenth century industrial examples, which can still be seen in much of their context. I know of no other place in the nation which has such an existing collection of intact sites.

[2] The sites have exceptional value and quality to illustrate and interpret nineteenth century industrialization. Most of these sites have already been developed in one form or another. What they need is protection and support to maintain them. The National Park Service can build on an extraordinary existing set of sites developed by nonprofit organizations and individuals.

[3] The sites offer superlative opportunities for public enjoyment. Walking tours already are available for many of the sites. Car and bus tours would allow visitors to move among and enjoy a set of the sites. Coherent ranger tours to go along with these tours would immensely raise the visibility and value of the tours.

[4] The sites as a whole retain a high degree of integrity as a true, accurate, and relatively unspoiled example of nineteenth century industrialization.

Comparison with Other Potential Nineteenth Century Industrial Sites

The national significance of the Blackstone Valley National Park needs justification relative to other potential sites.

[1] Connecticut Valley from Northampton, Massachusetts, to Middletown, Connecticut, along with the nearby Naugatuck Valley in Connecticut to Long Island Sound and nearby New Haven. Arguably this area is probably the second most important intact set of sites for a national park. It

encompasses the federal and private armories which were important in machine work, especially machine tools. The clock, hardware, and brass industry were important and there are some significant textile mill sites remaining. The interpretation of this area is much more complex because of the diversity of industries and the nature of the development process. The integrity of this area has also been disrupted because suburbanization in the twentieth century has been more pervasive due to the high income of the population, especially in Connecticut.

[2] Eastern Massachusetts. There are many intact industrial sites around Boston that have a rich history from the nineteenth century. The Lowell National Historical Park has captured one of the most spectacular examples of that history. The addition of numerous other sites in one national park would be difficult because the suburbanization of the Boston region has removed so much of the industrial landscape. Essentially, the park would be buildings scattered across a suburban landscape without much contextual areas surrounding them.

[3] Mohawk Valley in New York State and the Erie Canal. This valley has many small industrial cities which include some of the nation's most prominent nineteenth century firms. The industries are quite diverse, thus the interpretation is mostly industry specific. The long extent of this valley makes it difficult to operate coherently as a national park. The valley and its industrial towns can be seen as part of a nice driving tour, but the density of the sites is too low to be worth investing in as a national park.

[4] Hudson Valley. A number of great examples of industrial towns are strung along the valley, but the density of sites is low and many of the buildings have been removed.

[5] New Jersey across from New York City. This area has numerous examples of nineteenth century buildings and sites. Again, like the Boston area, twentieth century suburbanization has wiped out much of the integrity of the area, making it difficult to interpret.

[6] Philadelphia area. A moderately large number of industrial sites are scattered across a larger area of southeastern Pennsylvania. The surviving sites are mostly in the iron and steel and machinery industry sectors. However, these are quite scattered across a large landscape, and suburbanization of southeastern Pennsylvania has destroyed much of the integrity.

[7] Pittsburgh area. This area would have been interesting to preserve if it had been done before the removal of much of the iron and steel industry within Pittsburgh. However, so much has disappeared that the core of this national park is gone. In a large territory surrounding Pittsburgh many towns have remnants of iron and steel landscapes, but much of this is repetitious, though interesting. The low density of sites across a large territory would make this difficult to manage as a park and it would attract few tourists.

[8] Midwestern industrial cities. There are many fine relics of nineteenth century industrialization in individual industrial cities in the Midwest, such as Cleveland, Cincinnati, Chicago, Milwaukee, and St. Louis. However, these individual cities have had so much alteration that it is difficult to portray them as a national park. They do not rise to the standard as special places because the themes are similar. Local groups in each metropolitan area can handle the appropriate type of industrial story-telling, and the local historical societies can work effectively with the metropolitan area tourist areas.

Two final points:

[1] Why now?

If the National Park Service wants to turn the Blackstone Valley into a national park the time to initiate this process is now. The high density integrity of the Blackstone Valley as a replica of nineteenth century industrialization has been preserved up to now because the twentieth century economic growth did not impact this valley in a large-scale way. The Valley

has suffered through a century-long period of first decline and then slow growth. The bad result of this was that the population did not prosper. The good part was that many of the industrial sites were not destroyed.

This era of slow growth has come to an end as the Blackstone Valley becomes engulfed by the suburbanization of the greater Boston area. This area has transformed itself again into a massive center of software, technology equipment, biotechnology, and business services. Although it experiences waves of boom and bust in real estate markets, the long term trend is clear. The area is rapidly spreading outward in housing, office parks, commercial retail businesses, and so on. This area of rapid transformation has reached the edge of the Blackstone Valley. It will engulf it over the next two decades. The good news about this development is that it brings enormous private and public financial resources which can help to preserve key historical sites for future enjoyment.

[2] National Park Service and Public-Private Partnerships

The creation of a Blackstone Valley National Park under the auspices of the National Park Service would provide the organizational heft and talent to maintain and enhance the rich density of nineteenth century historical sites in the Valley for the future enjoyment of Americans and foreign visitors. It is assumed that the National Park Service would own only small amounts of land in this valley. The key to success of this park then would be for the National Park Service to develop an organizational capacity to work creatively with numerous public-private partnerships, private individuals and groups, and nonprofit organizations in the Valley. This would be truly a twenty-first century park. The model for this type of macro organization exists in the successful public-private partnerships in many metropolitan areas, some of which have

been in existence for as long as fifty years. The difference for the park would be the plethora of organizations which the Park Service would be working with.

One additional suggestion would be for the Park Service to work creatively with private individuals to encourage some group to set up a private foundation which would seek to build a large endowment to provide ongoing support for the many historical sites and museums. This would leave the budgetary impact on the Park Service to be in staffing and general administrative expenses. The funds for this endowment are available in the numerous wealthy individuals and families of the Boston area, many are “old” wealth and many have become wealthy from successful firms over the past three decades or so.

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