

Benevolent Capitalists: Corporate Funding of Education in Waltham, Massachusetts 1814-1865

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BENEVOLENT CAPITALISTS:
CORPORATE FUNDING OF EDUCATION IN
WALTHAM, MASSACHUSETTS 1814-1865

Dissertation
by

JOHN WARREN COX

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of the requirements for the degree of
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ABSTRACT

Benevolent Capitalists:

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By John W. Cox

Dennis Shirley, Ph.D, Chair

In 1814, a group of wealthy Boston merchants led by Francis Cabot Lowell established the Boston Manufacturing Company in Waltham, Massachusetts. In the decades before the Civil War, Lowell and his partners constructed public schools for Waltham children living in the vicinity of the mills and paid many of the schools' educational expenses, including teachers' salaries. The company also promoted adult education through its establishment of the Manufacturers' Library and its support of the Rumford Institute for Mutual Instruction, one of the first lyceums in the United States.

Previous research on the Boston Manufacturing Company has primarily focused on its unique labor force ("mill girls") and its role as America's first modern industrial corporation, while the story of the company's involvement in education has been neglected. Based on company records, school committee reports, newspaper accounts, Francis Lowell's personal correspondence, and other archival sources, this study highlights the forgotten history of corporate support for education in antebellum Waltham. The findings indicate that the support given to Waltham educational institutions by Francis Lowell and his business partners can be attributed to their patriotism, generosity, and belief in civic virtue. Implications for the history of American education, the Industrial Revolution, and twenty-first century public/private sector educational partnerships are addressed.

For my mother and father

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When I decided to apply for admission to the doctoral program at Boston College, a friend remarked, “Are you sure you want to do this? You know a doctoral program is a lot of work and can be very lonely.” My friend was correct. As anyone who has gone through a doctoral program will attest, it is a lot of work. Strangely enough, however, I found the work load to be invigorating rather than a burden. As I sat in classes in Campion Hall, I often thought how fortunate I was to be there. How many people are given the opportunity to study under some of the most accomplished scholars in the world?

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ABBREVIATIONS

BMC	Boston Manufacturing Company
FCL	Francis Cabot Lowell
MHS	Massachusetts Historical Society
MSS	manuscript
NA	Nathan Appleton
WPL	Waltham Public Library

CHAPTER 1: PROBLEM

In the early decades of the seventeenth century, English colonists began arriving in North America seeking refuge from the social, economic, and religious upheavals taking place in their native land. Prominent among the early colonists were the Puritans who settled Massachusetts Bay Colony. Unlike the men who traveled to Virginia in search of wealth, the Puritans came to the New World in families, determined to establish a permanent, self-sustaining community based on adherence to the word of God. As God-fearing Englishmen and Englishwomen, the Puritans recognized the importance of transmitting their English culture and Calvinist religious doctrines to their children through education. According to the Puritans, children required early moral instruction in order to attain salvation (Mintz, 2004). Just as in the Old World, education was primarily a family responsibility, with additional instruction provided in the Puritan meeting house and in the local schoolhouse (Cremin, 1977). Schooling was expected to reinforce the rigid social and religious values that animated the Puritan community. Most importantly, all members of the Puritan community had to be literate in order to read the word of God, thus foiling the efforts of “that ould deluder, Satan, to keepe men from the knowledge of the Scriptures” (Massachusetts School Law, 1647/1974).

The political upheaval culminating in the American Revolution and the establishment of a republican form of government in the United States greatly impacted the relationship of school to society. Although education in Massachusetts continued to reflect the state’s Puritan heritage, schools were now expected to prepare pupils for citizenship and help create a common American culture (Tyack, 1967). In the bracing aftermath of the Revolution, Americans of all political beliefs recognized the importance of an educated citizenry to the future success of the new republic (Jefferson, 1786/1974; Rush, 1786/1974; Webster, 1788/1974). Education, it was widely believed, would help

ensure social mobility by providing talented, hardworking individuals with the tools necessary to rise above the station of their birth. In addition, education would inculcate republican values in the hearts and minds of pupils. Benjamin Franklin (1750/1844), for example, believed that “nothing is of more importance for the public weal, than to form and train up youth in wisdom and virtue” (p. 48). In a letter commending the Kentucky legislature for its appropriations on behalf of education, James Madison (1822/1910) wrote, “A popular Government, without popular information, or the means of acquiring it, is but a Prologue to a Farce or a Tragedy; or perhaps both” (p. 103). Federalist John Jay (1785/1891) considered education to be the “soul of a republic,” and wrote that “nothing should be left undone to afford all ranks of people the means of obtaining a proper degree of it at a cheap and easy rate” (p. 139). Benjamin Rush (1786/1965) claimed that the purpose of education was to “convert men into republican machines,” so that they could “perform their parts properly in the great machine of the government of the state” (p. 17). To Noah Webster (1790/1967), education would “implant, in the minds of the American youth, the principles of virtue and liberty,” and create in students an “inviolable attachment to their own country” (p. 93). According to Thomas Jefferson (1786/1974), “the preservation of freedom, and happiness” could only be guaranteed by the “diffusion of knowledge among the people” (p. 750).

In their writings on education, most of the Founders (with the possible exception of Alexander Hamilton) took for granted that they were discussing education in a largely agrarian nation. At the time of the first federal census in 1790, approximately 95 percent of the American people lived in settlements of less than 2,500 people (Bureau of the Census, 1975). Ten years later, Jefferson, a confirmed agrarian, was elected president. Although his views on manufacturing would evolve over time, Jefferson exalted farmers as the backbone of the American republic, once referring to those who tilled the soil as “the chosen people of God...whose breasts he has made his peculiar deposit for substantial

and genuine virtue” (Jefferson, 1787/1954, p. 165).¹

Yet even as Jefferson assumed the presidency, the first stirrings of industrialization were already taking place in the United States, challenging the new president’s belief in a self-governing nation of yeoman farmers and skilled artisans. In 1789, Samuel Slater, an Englishman with a thorough knowledge of textile mills and machinery, emigrated to America and partnered with Moses Brown to establish a cotton mill in Pawtucket, Rhode Island. During the first decade of the nineteenth century, numerous cotton spinning mills were established in southern New England, harnessing the abundant power of the streams and rivers found throughout the region. With the Embargo Act of 1807 closing off trade with England, the number of textile mills in the United States proliferated. By 1810, there were 269 such mills in the nation, including 54 in Massachusetts (Bureau of the Census, 1814). For the most part, these “Rhode Island system” mills tended to be relatively small, family-owned businesses operating with minimal capitalization (Dunwell, 1978, p. 52).

However, in Waltham, Massachusetts, an entirely new system of manufacturing was established along the banks of the Charles River. In 1813, an informal, close-knit group of wealthy Massachusetts merchants often referred to as the “Boston Associates” (principally Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton), incorporated the Boston Manufacturing Company to mass-produce cotton cloth.² The following year, they constructed a massive, four-story brick mill in Waltham adjacent to a 10-foot waterfall on the Charles River. The mill town of Waltham became the prototype

¹ In a letter written in 1816, Jefferson (1808-1816) stated that he was ready to “place the manufacturer by the side of the agriculturist” (p. 504). According to Bender (1975), this statement does not represent a fundamental change in Jefferson’s philosophy. Rather, Jefferson had come to believe that in the United States, manufacturing was compatible with agrarianism due to the nation’s large expanse of virgin land which would prevent the concentration of wealth and power in eastern cities.

² Weil (1998) explains the derivation of the expression, “Boston Associates,” noting that it was first used in 1935 by Vera Shlakman in her study of Chicopee, Massachusetts. Since then, historians have used the phrase to describe the informal group of Boston businessmen who were instrumental in the establishment of the textile industry in New England.

for future textile centers such as Lowell and Lawrence in Massachusetts and Manchester in New Hampshire. To attract laborers to their factory in Waltham and to create a uniquely American system of manufacturing that did not replicate the squalor of English manufacturing centers, the Boston Associates offered their workers regular cash wages and a safe, moral environment in which to live. In addition, the Associates constructed an attractive community in the vicinity of their mill, providing employees with social services that catered to their religious and educational needs. In Waltham, as well as in other large factory towns, “mill girls” were hired to attend power looms and other textile machinery. The girls lived in company-built boarding houses set along tree-lined streets, closely supervised by company-appointed matrons (Appleton, 1858; Mailloux, 1957). These factory towns overturned traditional New England agrarian society and ushered in a new era of industrial capitalism that eventually served as a magnet for foreign (predominantly Irish) laborers and spawned the first forms of American trade unionism.

Yet what happened in Waltham appears to have been unique and a reflection of the rapidly changing era in which systems of public schooling and social welfare were still fluid and variable from one town to another. Jefferson and his Republican allies feared the rise of the new manufacturing sector, anticipating that it would demolish the self-sufficiency he prized in the landowning farmer and inject European corruption into the New World. And while Jefferson’s fears of the loss of personal independence may have come to pass in the long run with the rise of industrialization, in the short run new corporate elites seem to have piloted a number of different ways of institutionalizing support for social services like education.

That this was so can be seen to an unusual degree in Waltham, where the new business elite actively promoted and generously funded public schools, a library, and a lyceum not only for factory employees but for local townspeople as well. Also, unlike some corporations that initially supported education but soon withdrew their patronage,

the Boston Manufacturing Company actively supported education in Waltham for almost 50 years. Did this corporate funding result in an abrogation of the local self-governance that many Founders prized in the new republic? Not in the case of Waltham. Despite corporate funding, control of these schools resided in the hands of town voters who approved the school budget and elected a school committee to set curriculum and ensure that state laws were followed. Also, each school district had a “prudential committee” responsible for hiring teachers (with the approval of the school committee) and overseeing the day-to-day operation of the school (Woytanowitz, 1978). The Waltham schools thus seem to have featured an unusual combination of corporate funding and democratic control. Finally, Waltham is also unique in the unanimity with which town residents and historians have, for almost two hundred years, praised the Boston Associates for their enlightened treatment of workers and generosity to the community, as exemplified by their interest in promoting education.

Despite their willingness to appropriate corporate funds for public schools, a library, and a lyceum, there is no evidence that the Boston Associates ever discussed at length their vision of the role of education in a factory town. In fact, such a discussion would have seemed strangely at odds with their personas. After all, these were practical men engaged in the serious task of monitoring their financial investments and administering their business enterprises (Dalzell, 1987). There is also no evidence that the townspeople of Waltham, whose days were occupied with the mundane chores of daily living, ever publicly discussed such an esoteric topic as the purpose of education in their community. Yet surely at some unspoken level, the social changes brought on by industrialization must have caused the Boston Associates and local residents to reflect on what they wanted their schools to accomplish. Was the Founders’ belief that education should be used to instill republican virtue in young Americans still applicable in an industrial community such as Waltham? In an industrial society, was it realistic to expect

education to ensure social mobility, thereby preserving social harmony among all classes of people? Or had industrialization, which had transformed so much of American society, also changed the purpose of education? Was it now the responsibility of Waltham's schools, particularly those in the factory districts, to prepare students for a lifetime of toil in the mills of the Boston Manufacturing Company?

The problem this study will address is the impact of industrialization on education in Waltham during the antebellum era. To shed light on the research problem, this study will:

- Describe the founding of the Boston Manufacturing Company and its paternal relationship with its workers and the town of Waltham;
- Examine the public schools and other educational institutions established by the Boston Manufacturing Company;
- Determine why the Boston Associates provided substantial financial support for education in Waltham over an extended period of time; and
- Determine why Waltham citizens and local historians have universally praised the Boston Associates for their support of education when the very same industrial leaders were often criticized by residents of other towns in which they established textile mills for their lack of civic leadership and democratic participation.

In chapter 2, the literature review examines the historiography of American education, focusing on two major historical interpretations of the purpose of education: the democratic-liberal interpretation and the revisionist interpretation. The literature review also surveys historical studies of the professional and personal lives of the Boston Associates, historical studies of the American Industrial Revolution written

from a regional and national perspective, and finally, historical studies of the Industrial Revolution in Waltham written from a local perspective. Chapter 3 provides a description of the research design, along with the procedures used to analyze historical documents including the company records of the Boston Manufacturing Company, the personal papers of the Boston Associates, the annual reports of the Waltham School Committee, town and state government records, and local, state, and national newspapers. Chapter 4 describes Waltham before the Industrial Revolution, with particular attention paid to the importance of education and the development of the local economy during the colonial era and in the early republic. Chapter 5 investigates the backgrounds and beliefs of Francis Lowell, Patrick Jackson, and Nathan Appleton, seeking to identify the formative events that influenced their later involvement in the Industrial Revolution. The establishment and early history of the Boston Manufacturing Company, and the decision of the Boston Associates to institute a system of corporate paternalism, are discussed in chapter 6. Chapter 7 describes corporate support for education in antebellum Waltham and suggests reasons why the Boston Associates provided funding for several of the town's educational institutions for almost 50 years. The final chapter analyzes the changes that took place in Waltham as a result of the Industrial Revolution, and reviews the Associates' support for education in the context of the democratic-liberal and revisionist interpretations of American education. Implications for the study of educational and industrial history, and for public/private partnerships in education are also discussed.

CHAPTER 2: LITERATURE REVIEW

To make sense of what transpired in Waltham as a result of the Boston Associates' involvement in education, it will be helpful to examine their actions in light of the broader issue of the purpose of education in the new American republic. The events in Waltham will be examined in relation to the two dominant interpretations of American education that have emerged in educational historiography: the democratic-liberal interpretation which emphasizes the role of education in preparing students for citizenship, and the revisionist interpretation which emphasizes the role of education in preparing students to become obedient laborers in service to the capitalist system.

Theoretical Perspective

Overview

In the decades prior to the Civil War, the forces unleashed by the Industrial Revolution struck Massachusetts with the impact of a tidal wave, transforming virtually every aspect of life in the Commonwealth. Farming, fishing, and trading, the lifeblood of the state's economy since the arrival of the Puritans in the early 1600s, slowly declined in importance with the ascendancy of manufacturing. No corner of the state was immune to industrialization. In Beverly, sea captains' mansions and sweeping ocean vistas coexisted with a vibrant shoe industry; in North Adams, family farms stood in the shadows of newly constructed textile mills; and in Waltham, the Boston Manufacturing Company expanded so quickly that the power of the Charles River soon had to be supplemented with the power of steam. The growth of manufacturing centers such as Lowell, Lawrence, and Chicopee was unprecedented in size and scope; John Greenleaf Whittier thought of Lowell as "a city springing up, like the enchanted palaces of the Arabian tales, as it were in a single night – stretching far and wide its chaos of brick masonry and painted

shingles” (Whittier, 1845, p. 9). Throughout Massachusetts, the Jeffersonian ideal of an agrarian society slowly receded as massive mill complexes and company boarding houses displaced farmers and obliterated nature. Morison (1941) notes that by 1840, the state had shifted from “wharf to waterfall; she had become predominantly a manufacturing state” (p. 214). Ten years later, the federal census revealed that less than 19 percent of the state’s male population over the age of 15 still earned a living by tilling the soil (Bureau of the Census, 1853).

But what of education? If the agrarian republic envisioned by the Founders was no longer relevant, then what of their belief in the power of education to foster republican virtue in the young? Were the small, ungraded district schools of agrarian Massachusetts, whose lineage harkened back to the state’s Puritan heritage, an anachronism in the new industrial age? Had the transformation of the economy also transformed the purpose of education? Educational historians have wrestled with these questions, seeking to develop a conceptual framework to explain the relationship between education and industrialization in the first half of the nineteenth century. The historical consensus that emerged in the 1850s dominated educational historiography for over a century until challenged by revisionist historians in the 1960s.

The Democratic-Liberal Interpretation of American Education

The roots of the democratic-liberal interpretation of American education go back to the early years of American history. According to this interpretation, the purpose of education was to develop well-informed citizens able to fully participate in and contribute to the democratic institutions that lay at the heart of the American republic. Education and public morality were thought to be inseparable; through schooling, youngsters would grow up to become wise and virtuous citizens (Siracusa, 1979). In addition, adherents of the democratic-liberal interpretation believed that public education helped create an

open, fluid society in which success was determined by virtue and merit rather than the circumstances of one's birth, making possible Jefferson's belief in a "natural aristocracy" of men (Adams, 1813/1925, p. 92). Thus, education would promote political stability and ensure social mobility by making American society "more open, more just, and more democratic" (Ravitch, 1978, p. 9). Historians who subscribe to the democratic-liberal tradition view education through the lens of political ideals, believing that public schools encouraged "democracy, opportunity, humanitarianism, enlightenment, and the development of an American consensus" (Kaestle & Vinovskis, 1980, p. xvii).

The most influential figure in the development of the democratic-liberal tradition of education was Horace Mann. In 1837, Mann was appointed secretary of the newly established Massachusetts Board of Education by Whig Governor Edward Everett. His 12-year tenure as secretary coincided with the rapid expansion of manufacturing in the state and the arrival of the first wave of immigrants from famine-wracked Ireland. In his role as secretary, Mann was strongly supported by Massachusetts business interests (Field, 1989; Messerli, 1972). In fact, Edmund Dwight, the state legislator who recommended Mann's appointment to Governor Everett, was himself a prominent textile manufacturer. Mann worried that industrialization would undermine social harmony by creating jealousy among the different classes of people. He recognized the danger in "fatal extremes of overgrown wealth and desperate poverty," which would inevitably lead to "the domination of capital and the servility of labor" (Mann, 1849, pp. 58-59). Manufacturers were also concerned with the impact of industrialization, fearing that it could potentially lead to social and political unrest, thereby threatening not only their profits but also their position in society (Bowles & Gintis, 1976; Field, 1989; Hartford, 2001). The solution to the problem, according to Mann, lay in education. With the fervor of a revival preacher and the conviction of a true believer, Mann tirelessly promoted common schools as the panacea for society's ills. Education would provide all children

with equality of opportunity, functioning as the “great equalizer of the conditions of men – the balance wheel of the social machinery” (Mann, 1849, p. 59). No problem, including “intemperance, avarice, war, slavery, bigotry, (and) the woes of want and the wickedness of waste,” was immune to the healing power of education (p. 42). Mann (1848) even went so far as to claim that “ninety-nine hundredths of all the vices and crimes under which society now mourns and agonizes” would be eradicated by the “redeeming and transforming influences” of the common school system (p. 87). In a rhetorical flourish that encapsulates his faith in education, Mann (1849) prophesied that “a race of men and women, loftier in stature, firmer in structure, fairer in form, and better able to perform the duties and bear the burdens of life, would revisit the earth,” simply by teaching physical education and health in the common schools (p. 53).

Mann’s conception of education reflected his innate optimism and his belief in the perfectibility of man. His common schools would provide all children with a tax supported, general education as good as the education offered at any private institution. Also, unlike private schools that separated children according to religion and wealth, Mann’s common schools would function as true crucibles of democracy, attended by children of all backgrounds. While studying in the classroom and playing in the school yard, Mann believed that children would develop lasting friendships that would create a sense of community and foster social harmony at a time when industrialization, urbanization, and immigration were fraying the fabric of traditional society. As Cremin (1957) points out, Mann was seeking to create inclusive public schools that would be acceptable to the increasingly diverse population residing in Massachusetts. His common schools would teach morals without teaching religion, and teach the principles of republican government without indulging in party politics. He believed in “the development of the common nature; the cultivation of the germs of intelligence, uprightiness, benevolence, truth, that belong to all” (Mann, 1840, p. 88).

In his crusade for public education, Mann encouraged Massachusetts citizens to recall the heritage of their state and keep faith with their Puritan ancestors who founded the first public schools in North America some 200 years earlier. Building upon the educational foundation instituted by the Puritans, according to Mann (1844), was a solemn obligation, “the debt of gratitude we owe to our ancestors for establishing our system of Common Schools” (p. 46). By wrapping his beliefs in the mantle of the past, Mann was able to portray his educational policies as a continuation of the state’s traditional concern for public education. Mann claimed that it was he, not his critics, who stood firmly in the mainstream of Massachusetts history. He asked, “Can there be a man among us so recreant to duty, that he does not think it incumbent upon him to transmit that system, in an improved condition, to posterity, which his ancestors originated for him?” (p. 47).

Echoing the beliefs of the Founders, Mann (1849) argued that republican government could not exist without an educated citizenry. He reasoned that since elected officials reflected the moral character and wisdom of their constituents, it was incumbent that a “well-appointed and efficient means for the universal education of the people” be created (p. 78). Without universal education, Mann considered republican government “the most rash and fool-hardy experiment ever tried by man...It may be an easy thing to make a Republic; but it is a very laborious thing to make Republicans; and woe to the republic that rests upon no better foundations than ignorance, selfishness, and passion” (p. 78).

Certainly most Massachusetts residents in the first half of the nineteenth century would have agreed with Mann’s contention that republican government required an educated citizenry. After all, the Commonwealth was the cradle of liberty, and the ideals of the Founders still burned brightly in the hearts and minds of her citizens. Older residents of the state had experienced first-hand the hard-fought struggle for

independence, while their children were raised in the heady environment of post-war nationalism. As late as the middle of the nineteenth century, some Waltham residents still recalled John Adams stopping in town for breakfast on his journey to New York to be inaugurated as the first vice president of the United States; others had watched President George Washington's triumphant procession through the center of town during his tour of New England in 1789 (Nelson, 1879). Such people would have instinctively understood the importance of educating children to assume their role as virtuous and engaged citizens of the American republic.

However, by the time of Mann's tenure as secretary of the Board of Education, Massachusetts was no longer the agrarian, duty-bound, Calvinist stronghold that it had been at the turn of the nineteenth century. Farms were giving way to factories, and Calvinists now coexisted uneasily with Unitarians (and even Catholics). In order to convince a skeptical public of the need for universal public education, Mann realized that a new line of reasoning would have to be developed, one that would take into account the profound economic and social changes brought on by industrialization. Therefore, to industrialists, Mann (1842) promoted education as a "producer of wealth" (p. 101), while intelligence was "the great money-maker" (p. 107). He heaped praise on those engaged in business, referring to them as "the most intelligent and valuable men in our community," and credited them with recognizing the "astonishing superiority in the productive power, on the part of the educated over the uneducated laborer" (p. 61). At the same time, Mann was not averse to criticizing factory owners who ignored the Massachusetts child labor laws enacted in 1836, noting that in some towns the law had been "uniformly and systematically disregarded" (Mann, 1840, p. 42). Industrialists would not be the only beneficiaries of universal public education. Mann also held out the promise of a better life to factory operatives, claiming that "those who have been blessed with a good Common School education, rise to a higher and a higher point, in the kinds of labor performed, and

also in the rate of wages paid, while the ignorant sink, like dregs, and are always found at the bottom” (p. 86).

Mann’s influence continued to be felt long after his death in 1859. His passionate faith in public education was accepted by generations of educational historians, and formed the basis of a consensus interpretation of American education that held sway for nearly a century. In the consensus interpretation, common schools were accorded an important role in the American narrative, idealized as patriotic institutions that promoted democracy, productivity, and equality of opportunity. The publication of a series of state histories of education during the centennial celebration of 1876 helped solidify this triumphant interpretation of the history of public education. In the twentieth century, Thomas Davidson (1900/1970) and Ellwood Cubberley (1919/1962) continued along the path blazed by Horace Mann, exalting the teaching profession and glorifying public schools as the most perfect expression of American democracy. Like Mann, Cubberley recognized the destabilizing impact of industrialization on society, and claimed that humanitarians and workers (as opposed to conservatives and those “belonging to the old aristocratic class”) united to push for tax-supported schools (p. 165). By the 1950s, the one-dimensional story of the triumph of public education was firmly etched into the American consciousness, assuming its place alongside other widely accepted and cherished interpretations of the nation’s past.

The Revisionist Critique

As was true with so much of the traditional narrative of American history, the consensus on educational history was challenged during the 1960s. The first of the revisionist historians, Bernard Bailyn (1960), traced the birth of the consensus interpretation to the publication of Thomas Davidson’s (1900/1970) book, *A History of Education*, which praised teaching as “the noblest of professions, and that which ought

to call for the highest devotion and enthusiasm” (p. vi). Davidson’s book was significant, according to Bailyn, because it was “taught as an introductory course, a form of initiation, in every normal school, department of education, and teachers college in the country,” and gave future teachers an “everlasting faith in (their) profession” (p. 8). Five years later, educational historian Lawrence Cremin (1965) followed the trail of the consensus interpretation back even further, to the 1850s, when Henry Bernard began publishing the *American Journal of Education*, “possibly the most imposing work of educational scholarship ever produced” (p. 6). Cremin noted that the consensus interpretation gained further credence from the intense nationalism generated by the centennial celebration of 1876 when a number of books on educational history were published whose “leitmotif was the genesis, rise, and triumph of the public school” (p. 14). The publication of Ellwood Cubberley’s (1919/1962) epic work, *Public Education in the United States*, solidified in the American consciousness the forward-marching, triumphant interpretation of American education that was widely accepted until the 1960s.

According to the revisionists, the consensus interpretation of educational history was excessively one-sided and optimistic. To Bailyn (1960), the consensus interpretation was written by “educational missionaries” who were “seeking to demonstrate the immemorial importance of theories and procedures in which they were engaged” (p. 9). Cremin (1965) summarized Cubberley’s work as the “story of educational struggles waged and won, of educational enemies routed and destroyed, and of educational services extended and perfected” (p. 2). Tyack (1974) argued that consensus historians such as Cubberley “told a triumphant ‘house history’” whose main purpose was to provide educators with a “greater sense of professional esprit and identity” (pp. 8-9). Revisionists also criticized the consensus narrative for its emphasis on the organization of schools rather than describing what actually took place in schoolhouse classrooms. Tyack referred to this as “an insider’s view, seen from the top down” (p. 9). Such a top down view of

education, according to the revisionists, created a version of educational history that erroneously equated laws, official documents, and school board reports with teaching and learning. Finally, the revisionists were critical of the consensus interpretation for looking at schools in isolation from other important trends and organizations in American history that impacted education (Bailyn, 1960; Cremin, 1965; Tyack, 1974). What was needed, according to Cremin (1965), was a “comprehensive view of education” that took into account the “private, quasi-public, and public agencies committed to education but not organized as schools” (p. 47).

While mainstream revisionists such as Bailyn, Cremin, and Tyack criticized the limitations of traditional educational historiography, a more serious charge against the consensus view was leveled by the “radical revisionists” of the late 1960s and 1970s (Ravitch, 1978). To the radicals, the consensus interpretation was a “warm and comforting myth” (Katz, 1968, p. 1); part of the “folklore of capitalism” and “the myth of equal opportunity and full personal development” (Bowles & Gintis, 1976, pp. 3-4). Unlike consensus historians with their emphasis on political ideals, the radical revisionists stressed the importance of socio-economic factors in the development of education in antebellum America. In fact, the radicals argued that any discussion of the history of American education without taking into account the capitalist system in which it developed was flawed from the start. They maintained that public education often functioned as the handmaiden of American capitalism, inculcating in students the submissive attitudes and good work habits needed to serve as productive factory workers. Disputing the consensus interpretation, the radical revisionists rejected the contention that workers demanded, and won, the right to universal public education from a tight-fisted, myopic upper class. Rather, the radicals argued that the middle and upper classes foisted public schooling on a reluctant and recalcitrant working class population in order to psychologically prepare them for a lifetime of labor in the nation’s factories, and as a

means to perpetuate the class system (Bowles & Gintis, 1976; Spring, 1972).

A different perspective on the relationship between class and education was provided by Glenn (1987). While agreeing that the crusade for public education was intertwined with questions of class interests, he asserted that it was a newly emerging professional class, “specializing in law and government, in social and moral uplift” that supported the common school movement in order to maintain social discipline and prevent the breakdown of law and order in the state’s factory towns (pp. 5-6). Rather than use public education to prepare youngsters to work in the state’s factories, the new cultural elite believed that common schools could be used to instill middle class values in the children of working class parents (Glenn, 1987).

In his landmark study of public education in antebellum Massachusetts, Katz (1968) argued that education was not immune to the profound social changes occurring in Massachusetts as a result of the Industrial Revolution. These changes put many middle class reformers and wealthy industrialists in a difficult position. Although they believed that progress and prosperity were inextricably linked to an industrial economy, they also recognized that industrialization was destroying the sense of community that had existed in Massachusetts since the founding of the Bay Colony in the early seventeenth century. Katz pointed out that the first three secretaries of the Massachusetts Board of Education all recognized the dangers posed by industrialization: Horace Mann was concerned with the “fatal extremes of overgrown wealth and desperate poverty,” Barnas Sears worried about the “current of sensuality” in cities that was “educating myriads of children,” and George Boutwell connected the decline of agriculture with “the loss of moral strength in the people” and noted the ill effects of urbanization on families (pp. 41-42). According to Katz, it was the social upheaval caused by industrialization, rather than humanitarian and democratic concerns, which motivated middle class reformers and wealthy businessmen to impose their vision of

educational reform on workers who were suspicious of public education.

In support of his assertion, Katz cited the decision to close Beverly High School in 1860. After analyzing the socioeconomic backgrounds of town voters, Katz concluded that middle class and wealthy residents of Beverly opposed the controversial decision to close Beverly High School in 1860, while working class residents voted in the affirmative. Katz also noted that prominent industrialists and merchants who were “intimately connected with the economic transformation of the state,” (p. 35) including Henry Oliver, Joseph White, and William Thorndike, were among the leading proponents of public education in Massachusetts.

Although Bowles and Gintis (1976) agreed that wealthy industrialists supported public schools as a means to advance corporate interests, the tone of their work was harsher and more conspiratorial than that of Katz. In their view, public schools were the cat’s paw of capitalism, always seeking to serve the interests of their master. According to Bowles and Gintis, schools were “dreary and rigid” (p. 36) institutions designed to foster “the relationships of dominance and subordinacy” (p. 11) found in the economic sphere, promote “the interests of profit and political stability” (p. 12), and “preserve and extend the capitalist order” (p. 29). Of course, in the narrative of Bowles and Gintis, the symbiotic relationship between business and education did not occur by chance. Rather, since the early 1800s, employers had “applied their considerable political influence” to create schools whose function was to prepare children “psychologically for work” (Bowles & Gintis, 1976, p. 10).

Not surprisingly, Bowles and Gintis considered Horace Mann and other advocates of public education to have been more committed to protecting the interests of industrialists than they were in helping children living in poverty. They noted that the first person to approach Mann about the possibility of serving as the secretary of the state Board of Education was the prominent Springfield industrialist Edmund Dwight, and

claimed that Mann's considerable political power was due to the "enthusiastic support from virtually all influential quarters" (Bowles & Gintis, 1976, p. 171). However, despite Mann's approval of the new capitalist order, Bowles and Gintis emphasized that he did recognize the need to mitigate the harsh aspects of industrialization through universal public education in order to guarantee equality of opportunity and ensure social harmony among classes. Thus, education allowed Mann to reconcile his desire for a just society with his faith in the new industrial order. However, to Bowles and Gintis, nineteenth century educational reformers were little more than apologists for the newly emerging capitalist order, more interested in "disarming the poor as in preventing poverty" (p. 28).

While Bowles and Gintis were certainly correct that Mann supported industrialization and in turn was supported by industrialists, it does not necessarily follow that he was seeking to advance corporate interests. In fact, it is difficult to think of him as an apologist for Massachusetts manufacturers. After all, Mann was a humanitarian reformer who took an interest in abolition, temperance, and the humane care of the mentally ill (Cremin, 1957). Although he believed that industrialization would result in social progress and increased opportunity for all, Mann (1848) also recognized the threat that industrialization posed to social harmony by widening the gap between rich and poor. Public education, according to Mann, would reconcile capital and labor, thereby creating a community of common interests.

It is also important to keep in mind that interpreting the history of education from either a consensus or revisionist perspective obscures a central truth about schooling in antebellum America. When the Constitution was adopted in 1788, education was not listed as a responsibility of the federal government. Rather, education was a power delegated to the states. The states, in turn, delegated the responsibility for education to the cities and towns. Therefore, it is impossible to speak of public education in America as a singular entity. There were, in fact, hundreds of educational systems within the

United States, each one free to follow the path of its own choosing. Kaestle and Vinovskis (1980) acknowledged the difficulty in reaching definitive conclusions about the purpose of education in antebellum America, claiming that not only were there significant differences between urban and rural schools, but also key distinctions among urban and among rural schools. In spite of these difficulties, historians have attempted to analyze and interpret education in antebellum America, seeking to understand the impact of industrialization on the nation's schools.

Historical Research on the Boston Associates and the Boston Manufacturing Company

What became of the mill community established in Waltham by the Boston Associates? This is where the historical narrative falls short. Due to its phenomenal growth, historians have focused their attention on Lowell, which was much larger and more successful than its sibling along the Charles River. Thus, like a fossil preserved in amber, Waltham's role in the Industrial Revolution has remained frozen in the 10-year period between the incorporation of the Boston Manufacturing Company and the commencement of textile manufacturing in Lowell. The historical narrative of the Industrial Revolution, therefore, is not so much incorrect as it is incomplete, for the story of the Boston Manufacturing Company did not suddenly end with the construction of textile mills in Lowell. The Waltham company continued to grow and prosper, treating its hometown with paternal care, particularly in regard to education. In the decades prior to the Civil War, the Boston Manufacturing Company established three public schools (two primary schools and a sub-primary school), a library, and a lyceum, which were open to all residents of Waltham (Mailloux, 1957).

Unfortunately, with the exception of Mailloux's dissertation, historians have shown little interest in the history of the Boston Manufacturing Company after the

founding of Lowell. Rather, they have treated the Industrial Revolution in Waltham as the opening act in a much larger, more important drama taking place along the Merrimack River. In fact, after the construction of the Lowell mills, hardly a mention can be found of what was occurring in Waltham, where the Industrial Revolution began. In addition, virtually nothing of substance has been written on the schools established by the Boston Associates in Waltham prior to the Civil War. Even within larger historical narratives on the early years of the Industrial Revolution, these company-supported public schools merit only the briefest of mentions. By ignoring developments in Waltham after the founding of Lowell, historians have missed an opportunity to develop a more comprehensive picture of the complex relationship between industrialization and education in antebellum Massachusetts, as well as develop a deeper understanding of the motives of the Boston Associates in supporting education in Waltham. Thus, the involvement of the Boston Manufacturing Company in education is worthy of special attention for two reasons: Waltham was the first town in America to experience the impact of large-scale industrialization on public education, and the same group of men who founded the Boston Manufacturing Company in Waltham also established other significant manufacturing communities in Massachusetts including Lowell, Lawrence, Holyoke, and Chicopee. Developing an understanding of the relationship between the Boston Manufacturing Company and education in antebellum Waltham provides a window through which to view the initial relationship between industrialization and education, thereby shedding light on the purpose of education in nineteenth century America.

Despite the lack of information on the factory schools, historians have thoroughly investigated other salient aspects of the lives of the Boston Associates and their role in launching the American Industrial Revolution. However, as Zevin (1975) points out, ascertaining the truth about the early years of the Industrial Revolution has not

always been an easy task due to the “sympathetic and heroic history” (p. 38) written by manufacturers and their admirers in the antebellum era. On the other side of the ledger, historians with an anti-business perspective have been quick to criticize the Associates, evaluating decisions made in the early nineteenth century with the benefit of twentieth century hindsight. The literature review will examine the full body of work on the Boston Associates and their role in establishing the textile industry in Waltham including:

- *Historical studies of the Boston Associates.* Biographers and historians interested in the class structure of antebellum Boston have studied the Boston Associates in detail focusing on who they were, what they believed, and what they hoped to achieve through their philanthropy. Also, historians have examined the individual lives of Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton, the three Associates most responsible for launching the American Industrial Revolution.
- *Historical studies of the American Industrial Revolution from a regional and national perspective.* Many historians of the Industrial Revolution have included the story of the Boston Manufacturing Company within the larger narrative of the industrial history of the United States. Invariably, these historians briefly mention the factory’s contributions to the town of Waltham (including contributions in the field of education).
- *Historical studies of the American Industrial Revolution from a local perspective.* Waltham historians have closely examined the impact of the Boston Manufacturing Company on their community from a local perspective. These historians have been the most thorough in describing the factory sponsored schools and other educational contributions of the Boston Associates.

Historical Studies of the Boston Associates:

Who They Were and What they Believed

Understanding the personal and professional lives of the Boston Associates - what they believed, what they valued, and how they operated - will provide a lens through which to view their paternal relationship with the town of Waltham and their employees. Such an understanding will also provide insight into the reasons for their generous financial support of educational institutions in Waltham.

After the Revolutionary War, many elite residents of Boston who had remained loyal to Britain left the United States for the mother country, thereby creating a vacuum at the top of the city's social and economic pyramid. Stepping into the breach was a small group of wealthy men who earned substantial profits first in shipping and trading, and later in manufacturing (Farrell, 1993; Pessen, 1973). These entrepreneurs operated under an unwritten code of ethics that valued social responsibility, the pursuit of learning, and the development of personal virtue (Goodman, 1966). According to Weeks (1966), these men were known for their "intellectual vigor and clear conservative thinking" (p. 4). Prominent among them were Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton, the founders of the Waltham company. The Lowell, Tracy, and Jackson families first achieved prominence as Newburyport merchants, while Appleton was the son of a prosperous New Hampshire farmer (Farrell, 1993; Greenslet, 1946; Gregory, 1975; Jaher, 1982). By the 1820s, these families were at the center of a "Brahmin enclave"³ in Boston, comprised of some 40 families closely related through marriage and business (Jaher, 1982). Members of these families (informally referred to by historians as the Boston Associates) were the primary shareholders in many large Massachusetts textile mills, and often served on the board of directors of the Waltham and Lowell corporations.

When considering the involvement of the Boston Associates in education in

³ According to Weil (1998), the term "Boston Brahmin" was first used by Oliver Wendell Holmes in 1861.

Waltham, it is important to keep in mind that regardless of their place of birth or the location of their businesses, these men considered themselves to be Bostonians.⁴ Their mills and machinery may have been in Waltham and Lowell, but their hearts and minds were set in Boston. Boston was where they lived and socialized; it was where they “sent their children to play on the Common and to be educated in public schools like Boston Latin” (Hall, 1997, p. 396). Of course, philanthropists have every right to determine which organizations and communities will benefit from their munificence. Still, some historians have commented on the fact that the Associates made few, if any, major charitable contributions to institutions based in Lowell.⁵ In his classic study of architecture in antebellum Lowell, Coolidge (1993) blames the paucity of twentieth century charitable institutions in that city on decisions made by the Associates a century earlier. Josephson (1949) remarks that John Lowell, the son of Francis Cabot Lowell, “left his great fortune not for the benefit of the citizens of Lowell but to set up the institute for public education that bears his name, in Boston” (pp. 54-55). To the Associates, Waltham and Lowell were outlying towns where their mills happened to be located. Day-to-day management of their textile factories was delegated to company agents, with the Associates content to make occasional trips to Waltham and Lowell when necessary.⁶

As their wealth steadily increased, the Boston Associates generously endowed

⁴ Patrick Tracy Jackson was the only Boston Associate actually to live in Waltham. Jackson’s sister, Mrs. Henry Lee, was incredulous when she heard of her brother’s plans. In a letter to her husband, Mrs. Lee wrote, “I most sincerely hope this manufactory in which he [her brother Patrick] is engaged may prove lucrative – they have now completed their Company and are beginning to think of fixing upon a stream and commencing their establishment, and I found, much to my surprise, that they really intended to live at the place – certainly Pat and perhaps Mr. Lowell. I had no idea that it was a thing that would decide their future destination” (Porter, 1937, p. 747).

⁵ Interestingly, no historian has mentioned that the Associates, in their personal gift-giving, also neglected Waltham-based institutions.

⁶ When James Monroe visited the Boston Manufacturing Company in 1817, Nathan Appleton accompanied the President on his tour. According to Appleton, Monroe was greatly impressed with what he saw in Waltham (Gregory, 1975). Also, when John C. Calhoun visited the Waltham mill in 1818, Appleton was close by his side (Josephson, 1949).

a host of Boston-based organizations. Among the institutions to benefit from their largesse were the Boston Athenaeum, the Massachusetts Historical Society, the Lowell Institute, Massachusetts General Hospital/McLean Asylum, and Harvard University (Story, 1980). The Associates also initially supported educational programs such as evening schools, libraries, and lecture series in some of their factory towns (Hartford, 2001). Some historians have suggested that the Associates' support of educational institutions can be explained by their desire to preserve social harmony at a time of rapid change and instability (Goodman, 1966; Hartford, 2001). According to these historians, the Associates funded education as a form of social control in order to minimize class differences, and at the same time, fulfill their civic obligations. As Daniel Webster, their patron political saint and fellow investor in the Boston Company stated, public education was "a wise and liberal system of police, by which property, and life, and the peace of society are secured" (Hartford, 2001, p. 84).

Of particular interest is the establishment of the Lowell Institute. Launched with a generous bequest of \$250,000 from John A. Lowell, the son of Francis Cabot Lowell and an executive in the Boston Manufacturing Company, the Institute sponsored free lectures for Boston residents (Story, 1980; Weeks, 1966). As if to emphasize his identification with Boston and relative indifference to Waltham, Lowell stipulated in his will that after his \$250,000 bequest had time to grow, some lectures could be sponsored at a nominal fee - the equivalent of two bushels of wheat - for Waltham mill workers and students at the Rumford Institute for Mutual Instruction, a local lyceum supported by the Boston Manufacturing Company (Weeks, 1966).

In addition to their interest in preserving social harmony, historians have identified other motives to explain the philanthropy of the Boston Associates. Claiming that Boston always "reserved its highest praise for wealth beneficently spent," Pessen (1973, p. 253) implies that the city's elite generously contributed to the welfare of the

community because they believed it was their duty to do so and to win the respect of their peers. Jaher (1982) speculates that it was “pangs of guilt” from engaging in unscrupulous business practices that caused the Associates to “reserve a portion of their gains for social redemption” (p. 77). According to Hall (1997), charitable giving was a strategy used by the Boston elite to maintain their public influence at a time when their political influence was waning. He points to the Lowell Institute, which was directly controlled by the Lowell family and offered its programs free of charge, as representing “an assertion of elite control over popular culture justified in a language of ‘public improvement’” (p. 406). By contributing to Boston institutions and serving on charitable boards, these Bostonians were able to “shape collectively the city’s economic direction, while at the same time assuring the influence of its elite families” (Hall, 1997, p. 405). Hall also points out that members of the Boston elite used philanthropy to justify their wealth, believing their generosity was clear evidence of their “worthiness to lead” (p. 403). In his study of the Lowell Institute, Weeks (1966) extols the Lowells’ “unique [contribution] in the annals of American cities,” and claims that they believed that “new ideas and better education would save Boston from decrepitude” (foreword). Historians have also asserted that the Boston Associates supported the Athenaeum and other cultural institutions because of their civic pride, sense of social responsibility, and desire to foster learning (Goodman, 1966; Story, 1975).

In the only comprehensive study of the Boston Associates, Dalzell (1987) attempts to unravel the “tangle of motives” that inspired their philanthropy, finding it virtually impossible to separate examples of generosity from acts of calculated self-interest (p. 115). He argues that in their temperaments and lifestyles, the Associates were deeply conservative men with a strong sense of duty and civic responsibility. They cherished the past, and fondly recalled the sense of community and social harmony that existed in the days of their youth. However, by the 1820s, the sense of community that they prized

was being undermined by the very industrialization that they created. Therefore, Dalzell believes that the Associates generously endowed educational and cultural institutions in Boston (as well as charitable organizations that helped the poor) in an effort to “foster a sense of common purpose among their fellow citizens” (p. 130). And while the Associates certainly welcomed industrialization, they also feared the rapid social change that followed in its wake. To mitigate the impact of industrialization, the Associates used their wealth to change the world “only enough to make it secure for people like themselves” (Dalzell, 1987, p. xii). Goodman (1966) raises the same point, arguing that the Associates, exemplars of “republican simplicity,” saw their role as “a republican aristocracy which stabilized as it transformed” (p. 437). However, when waves of poor Irish immigrants began arriving in Boston during the mid 1840s, the Associates no longer sought to re-create the sense of community that existed in pre-industrial Massachusetts. After 1845, they donated their money on two parallel tracks: to charities that helped the poor, and to cultural and educational institutions (Dalzell, 1987).

Historical Studies of the Boston Associates as Individuals:

Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton

As a group, the Boston Associates are often described as complex men whose actions and beliefs defy easy explanation. However, as individuals, the Associates are usually portrayed as good and decent men genuinely interested in the welfare of their workers and motivated by a strong sense of civic duty. Francis Cabot Lowell in particular has been depicted in almost saintly terms as a man of pure and exalted character whose life ambition was to create an industrial utopia devoid of the horrors he had witnessed in English manufacturing centers. Never a man of robust health, Lowell died in 1817 just as his Waltham company became a national showplace of large-scale manufacturing and enlightened labor practices. In one respect, Lowell’s early death at the age of 42 was

providential – freezing his reputation at a time when industrialization seemed to offer the best of all possible worlds. Unlike his fellow Associates, Lowell never had to justify his early faith in industrialization, nor answer for the negative aspects of the textile industry that emerged by the 1840s.

The most significant source of information on Francis Lowell's role in the Industrial Revolution is a pamphlet written in 1858 by his partner and friend, Nathan Appleton.⁷ Responding to a request from Lowell industrialists that he compile a history of the early textile industry in New England, Appleton (1858) wrote that he, along with Francis Lowell, Patrick Jackson, and others, had made "every possible provision for the moral character and respectability of the operatives" (p. v). According to Appleton, Lowell was the "informing soul" of the Waltham company, "beloved and respected by all who knew him" (p. 15). Others have echoed Appleton's description of Lowell. Massachusetts statesman Edward Everett praised Lowell for "the sterling purity and integrity of his character," and claimed that he deserved credit for launching the Industrial Revolution (Palfrey, 1843, p. xxx). Hunt (1858) refers to Lowell as an "extraordinary man" (p. 564), while the biographer of the Lowell family, Ferris Greenslet (1946), believes that Lowell was inspired by humanitarian concerns and commends his "vision, courage, and practical ability" (p. 418). While conceding that there is no definitive evidence that Lowell knew exactly the form that his industrial community in Waltham would assume, Coolidge (1993) extols the founder of the Boston Manufacturing Company as a "designer of utopias" (p. 18) who visualized a community that would be organized around manufacturing. Researchers will search in vain for negative comments on Francis Cabot Lowell from those who knew him. However, the testimonials to Lowell were often

⁷ Certainly Nathan Appleton cannot be considered a disinterested source of information on the early years of the Industrial Revolution. Spalding (1963) accuses him of "carefully omit(ing) all the sordid details concerning the establishment of the textile industry in northern New England" (p. 3). Weil (1998) refers to Appleton's pamphlet as a "self-serving text written forty-five years after the opening of the Waltham textile factory, in defense of Francis Cabot Lowell and his friends, including Appleton himself" (p. 1337).

made by his personal friends and professional colleagues. No descriptions of Lowell from his employees are known to exist.

Francis Lowell and his partners are also credited with understanding that the economic viability of the United States depended on its ability to provide for its own needs. During his trip to England, Lowell may have first realized the potential of industry to substantially increase the national wealth of the United States (Palfrey, 1843). Gibb (1950) believes that Lowell “appears to belong to that class of business men who sincerely identify their own with the public interest” (p. 59). Nathan Appleton has also been praised for his belief that hardworking, resourceful workers should have the opportunity for advancement (Gregory, 1975). According to Gregory (1975), Appleton possessed a “sense of mission to make the United States succeed and to make it a better place to work than England was” (p. 189).

The only discordant note to be heard in the hymn of praise accorded to Lowell has been sounded by Hannah Josephson (1949). She credits Lowell for his sense of social responsibility and pays him the backhanded compliment of being the only genius “in a family that produced many second-rate talents” (p. 11). After conceding that Lowell did establish excellent working conditions in his Waltham factory, Josephson proceeds to question his motives, arguing that he acted for practical, rather than idealistic, reasons. She argues that the accolades directed toward Lowell after his death came from his friends and followers who “tried to lend him moral and patriotic impulses that were not so much foreign to him as beside the point” (p. 24).

Francis Lowell may have been a farsighted businessman with the ability to conceptualize the establishment of cotton manufacturing in the United States, but it was his brother-in-law and business partner, Patrick Tracy Jackson, who possessed the administrative talent necessary to implement his visionary plans. One of the original investors in the Boston Manufacturing Company, Jackson worked closely with Lowell

and Paul Moody on the construction of the power loom and served as the on-site agent and treasurer of the Waltham mill. In business and in life, Jackson earned a reputation as a highly respected man of sound judgment and personal integrity (Gibb, 1950; Lowell, 1848; Putnam, 1905). No authors have commented specifically on Jackson's involvement in education in Waltham. However, John Lowell (1848) claimed that the "very first measures" taken by Francis Lowell, Nathan Appleton, and Patrick Jackson were to "secure that attention to education and morals among the manufacturing population, which they believed to be the corner-stone of any permanent success" (p. 6). Also, if Gibb (1950) is correct that Jackson was "the perfect agent for the execution of the plans of other men" (p. 59), then it makes sense that he would have supported Lowell's plans to establish manufacturing in New England without the poverty and vice he witnessed while in England.

Nathan Appleton has also fared well by the biographer's pen. He is often referred to as an honorable man of sterling character; generous with his wealth and motivated by a strong sense of civic responsibility (Gregory, 1975; Jaher, 1966; Tharp, 1973; Winthrop, 1861). While vacationing in England in 1811, Francis Lowell frequently met with Appleton, confiding in him his intention to open a cotton manufactory upon his return to Boston. Appleton encouraged Lowell, becoming one of the original investors in the Boston Manufacturing Company.⁸

In the decades leading to the Civil War, no man was more intimately connected with the textile industry and the economic development of New England than Nathan Appleton. However, Appleton was more than just another hard-headed businessman with

⁸ Initially, Appleton invested very cautiously, subscribing to only five shares of stock in the Boston Company out of 100 shares issued. He later wrote, "theoretically I thought the business ought to succeed, but all which I had seen of its practical operation was unfavorable; I, however, was willing to take five thousand dollars of the stock, in order to see the experiment fairly tried, as I knew it would be under the management of Mr. Jackson; and I should make no complaint under these circumstances, if it proved a total loss" (Appleton, 1858, p. 8). Patrick Tracy Jackson was the largest stockholder with twenty shares, followed by Francis Cabot Lowell with fifteen shares (Ware, 1931).

a flair for making money.⁹ He agreed with Francis Lowell that it was possible to establish a manufacturing community without the horrid working conditions and grinding poverty that they had witnessed in England (Appleton, 1858). Gregory (1975) cites Appleton's sense of public responsibility, and credits him with encouraging Lowell's humanitarian vision of a mill town that would treat workers with paternalistic care, providing them with such amenities as schools, a library, and a lyceum. More than any of the other Boston Associates, Appleton "repeatedly described the utopian environment that he wanted and hoped to create" (Gregory, 1975, p. 188). Tharp (1973) also praises Appleton's concern for the well being of his workers. She dismisses accusations that Appleton exploited mill workers and tolerated poor working conditions in his factories, stating that "there is no justification for this point of view in any reliable document" (Tharp, 1973, p. 100). Even Alexander Everett, the brother of Edward Everett and an early critic of manufacturing, praised the order and morality found at the Boston Manufacturing Company, noting that, as of 1827, only one instance of "irregular intercourse" had taken place at the Waltham factory since its founding in 1814. He concluded that in Waltham, "intemperance and the vices punishable by law were unheard of" (Siracusa, 1979, p. 98).

Historical Studies of the American Industrial Revolution:

The Regional and National Perspective

In virtually all historical accounts of the Industrial Revolution, the establishment of the Boston Manufacturing Company by Francis Cabot Lowell is recognized as a seminal event in American history. In fact, in consultation with a group of distinguished historians, the editors of *Life* magazine ranked the founding of the Boston Manufacturing

⁹ Appleton appears to have been somewhat defensive about his vast fortune. Toward the end of his life, he told Robert Winthrop, the president of the Massachusetts Historical Society, that "nothing is more untrue" than the belief that he had devoted his life to money-making. "The truth is, that my mind has always been devoted to many other things rather than money-making. That has never been a passion with me, or ever a subject of much concern. Accident, and not effort, has made me a rich man" (Winthrop, 1861, pp. 60-61).

Company as the fourth most significant event in the growth of the United States (“The 100 Events,” 1975, p. 8). Bender (1975) traces the economic transformation of Massachusetts from an agrarian to a manufacturing state to Francis Lowell’s factory in Waltham. According to the common narrative advanced by historians, Lowell travelled to England in 1810 where he toured textile mills, paying particular attention to the power loom. He returned to America just prior to the outbreak of the War of 1812, determined to open a textile mill that would avoid the poor working conditions found in English mills. After reinventing the power loom with the help of master mechanic Paul Moody, Lowell and his partners constructed a large mill in Waltham, Massachusetts, the first factory in America, possibly in the world, in which all of the processes of turning raw cotton into finished cloth were accomplished under one roof using waterpowered machinery (Bender, 1975; Dunwell, 1978). For his labor force, Lowell employed “mill girls”: the daughters of New England farmers drawn to Waltham by the promise of cash wages, pleasant boarding houses, and a safe, moral environment. Lowell died in 1817 at the age of 42, having lived just long enough to see his experiment in Waltham come to fruition. Several years later, Lowell’s business partners founded a new industrial community along the Merrimack River. The town of Lowell grew by leaps and bounds, and soon became synonymous with industrialization (Dunwell, 1978; Josephson, 1949; Sobel, 1974; Ware, 1931).

Although historians generally agree on the significance of the Boston Manufacturing Company, they differ as to why the Associates endowed the Waltham community with such amenities as churches, tree-lined streets, boarding houses, a fire engine, a library, a lyceum, and public schools. Undoubtedly Appleton and Lowell’s trips to England greatly affected their thoughts on manufacturing. Gregory (1975) notes that when Appleton visited England in 1802, he expressed disgust with what he observed in Manchester and hoped that the United States would avoid a similar fate: “For the happiness of our country, I wish it long without them (manufacturing)” (p. 143). Eight

years later, Lowell and his family travelled to England on an extended vacation.¹⁰ While there, he visited a number of textile mills, paying particular attention to the power loom, a machine not yet available in the United States. Josephson (1949) and Sobel (1974) believe that Lowell may have visited Robert Owen's utopian textile community in New Lanark, Scotland, pointing out that there are just too many similarities between the Waltham and New Lanark mills for it to be otherwise.¹¹ Many historians maintain that Lowell was horrified by the poor working conditions he observed in English textile mills (Bender, 1975; Dunwell, 1978; Ware, 1931; Wright, 1973). This assertion is supported by Appleton (1858), who was in England at the same time as Lowell and had "frequent conversations on the subject of the Cotton Manufacture" with him (p. 7). In fact, shortly after arriving in England, Lowell wrote to his uncle, William Cabot, commenting on the "distress and poverty" he observed in industrial towns (Bender, 1975, p. 33). However, as Dalzell (1987) points out, Lowell, unlike the more voluble and longer-living Nathan Appleton, left few written records or public comments on what he had seen. Although we know that Lowell visited English textile mills, "what he made of what he saw and how it influenced him we can only infer" (Dalzell, 1987, p. 7).

Most historians concede that the paternal care showered on company employees

¹⁰ Greenslet (1946) and Sobel (1974) imply that one reason Lowell travelled to England in 1810 was to learn about textile manufacturing. Gibb (1950) agrees, arguing that it is "scarcely conceivable" that someone as talented as Lowell would have been unaware of the opportunities available in manufacturing (p. 8). However, Mailloux (1957) states there is no evidence to support this claim. He writes that Lowell went to England for reasons of health (both he and his wife were not well), and because he wanted to provide his children with educational opportunities not available in the United States.

¹¹ Appleton did visit Owen's mills in New Lanark. He wrote, "Lanark stands on the top of a hill & hence we proceed to the River where are a range of very extensive cotton mills through the windows of which we saw the wheels in full motion for 4 or 5 stories together" (NA papers, MHS, journal of 1810, vol. 15 of bound volumes, Oct. 16, 1810). There is no record of Appleton having met with Owen on his visit to New Lanark. Also, Steinberg (1991) points out that the Boston Manufacturing Company positioned its mills "parallel to the Charles River, precisely as Appleton had observed in New Lanark" (p. 43). Prior to the founding of the Boston Manufacturing Company, most American textile mills were built perpendicular to their river.

and the town of Waltham by Francis Lowell and his partners was inspired, to some degree, by their sense of altruism. Not surprisingly, Appleton (1858) dwells on Lowell's interest in safeguarding his employees' well-being and protecting their moral character. Similarly, Coolidge (1993) praises Lowell for envisioning "a manufacturing town as an ideal community and the desire to organize it as such" (p. 22). Historians have also commended Nathan Appleton for his benevolence and far-sighted social vision (Coolidge, 1993; Gregory, 1975). However, other historians are more guarded in their assessment of the Associates' motives. Ware (1931) straddles the fence, writing that Lowell was inspired "perhaps by philanthropy, perhaps by business judgment" (p. 64), but in any case was determined to avoid replicating the English model of manufacturing. Bender (1975) agrees with this assessment, arguing that the surviving evidence indicates that the Associates were motivated by both self-interest and idealism. A slightly different interpretation is offered by Gibb (1950) who, in a generally sympathetic account of the early textile industry, asserts that the Boston Associates were, first and foremost, sharp businessmen interested in making money, but were also pleased with the social benefits that resulted from their benevolent system of manufacturing. Sobel (1974) and Dublin (1979) concur with Gibb's evaluation, recognizing that despite its "utopian streak," the Boston Manufacturing Company was primarily a business venture designed to make money. On the other hand, Dalzell (1987) questions whether there was anything at all utopian about the Boston Manufacturing Company despite the belief of some of Lowell's contemporaries that his corporation signified "a new and singularly benign kind of industrial order" (pp. 3-4). Still, Dalzell acknowledges that the Associates were willing to forego at least some profits in order to establish a humane system of manufacturing. Even Hannah Josephson (1949), a strong critic of the Boston Associates, admits that the working conditions and living standards in early Waltham and Lowell were excellent for the time period. Although she considers them "hard-headed businessmen," Josephson

concedes that the directors of the Boston Manufacturing Company “did not assume that because they were contributing to the economic development of the town that they had license to defile it” (p. 33).

Some historians have also linked the benevolent actions of the Boston Associates in Waltham and Lowell to their patriotism. According to Goodman (1966), these entrepreneurs considered themselves leaders of the nation, men whose success was based not on the circumstances of their birth but on hard work and personal achievement. Francis Lowell in particular is often singled out for his love of country and determination to free the United States from economic dependence on England. Massachusetts Governor Edward Everett regarded Lowell as a “great public benefactor” who understood that manufacturing would enrich the United States (Palfrey, 1843, p. xxxvii), while nephew John A. Lowell referred to his uncle “one of those wise and patriotic men, the founders of Waltham” (Lowell, 1848, p. 8). Goodman (1966) and Gregory (1975) point out that the Associates were intensely nationalistic men who believed that manufacturing would strengthen the United States by providing citizens with an equal opportunity to accumulate wealth, thereby preventing the rise of class consciousness. Although Gibb (1950) believes the Associates were motivated primarily by self-interest, he considers patriotism to be a secondary factor in their business decisions, referring to them as “highly patriotic citizens keenly interested in the progress of the new nation” (p. 40). Spalding (1963) agrees with Gibb’s assessment, citing as evidence the Associates’ willingness to sell their machinery to other American textile companies, thereby helping to liberate the United States from the clutches of European manufacturers. Virtually all historians refer to the Associates’ determination to establish a uniquely American system of manufacturing. They believed the European industrial model was corrupt and aristocratic and would, if established in the United States, contaminate what some historians have referred to as the American Garden of Eden (Dunwell, 1978; Marx, 1964;

Sanford, 1958). These industrial magnates were certainly interested in profits, according to Sanford (1958), but also thought of themselves as patriots who were “the principal agents in an American world mission to raise a regenerate society in the forest of the New World” (p. 2).¹²

The most common motive cited by historians to explain corporate benevolence in Waltham was the need to attract workers. Due to the availability of inexpensive western land, a chronic labor shortage vexed employers throughout New England (Abbott, 1910; Dalzell, 1987; Ware, 1931). The spinning mills established in southern New England by Samuel Slater and other early manufacturers solved the labor problem by employing families and children to tend the textile machinery. However, in the large integrated mills found in northern New England, the Boston Associates relied primarily on the “well educated and virtuous” daughters of yeoman farmers who would work in the mills for two or three years and then return to the countryside (Appleton, 1858, p. 15). By employing young women on a temporary basis, the Associates prevented the development of a permanent underclass of downtrodden urban workers, thus bringing to fruition their vision of an orderly industrial community free from the poverty prevalent in English manufacturing towns. There is some difference of opinion as to why Lowell decided on a female workforce. Undoubtedly he was troubled by the sight of young children toiling long hours in English mills (Dalzell, 1987; Dunwell, 1978). Also, according to Appleton (1858), Lowell’s decision to hire a female workforce was based on availability: while men had many options for employment, women were an untapped source of labor. Josephson (1949) suggests that women were familiar with spinning and weaving and were often considered to be a financial burden to their families. Dunwell (1978) speculates that

¹² In an acid commentary on the patriotism of the Associates, Josephson (1949) writes, “When the Embargo and the War of 1812 interfered with their shipping business they not only defied the law and traded with the enemy, but also plotted secession at the Hartford Convention. Love of their country and its institutions swelled in their breasts only when their influence in the administration was strong” (pp. 98-99).

Lowell needed “intelligent and dexterous, though not necessarily strong” (p. 32) laborers to operate his new power looms. In any case, there were certainly not enough young women living in sparsely-populated Waltham to meet the labor requirements of the Boston Manufacturing Company (Dalzell, 1987; Dublin, 1979).

The labor shortage in Waltham (and later in Lowell) has led many historians to speculate that the paternal system established by the Boston Associates was necessitated by the need to make factory work attractive to young women, as well as to soothe parents’ concerns about their daughters’ safety and moral well-being.¹³ In addition to regular cash wages and closely supervised boarding houses, Lowell and his partners enticed young women to leave their families’ farms by creating a community in Waltham that included churches for religious worship, a library open to company operatives, and a lyceum offering weekly lectures at a nominal yearly fee (Mailloux, 1957). According to Gitelman (1967), these amenities were offered to workers purely for business purposes, “compelled by necessity, rather than conferred by employer magnanimity” (p. 232). Josephson (1949) suggests that the corporation’s decision to build and subsidize churches in Waltham was a calculated business decision since very few young women would have even considered moving to a community that did not afford the opportunity for religious observance. While acknowledging that the Associates were troubled by the thought of European-style factories in America, Bender (1975) and Gitelman (1974) believe that it was the need to recruit workers, rather than any latent sense of altruism, that caused the Boston entrepreneurs to establish a system of corporate paternalism in Waltham. When the Boston Associates established mills along the Merrimack River during the 1820s, they

¹³ In his study of mill town life in Dudley and Oxford, Massachusetts, Prude (1983) makes an interesting distinction between the ideologies of rural Rhode Island-style mills and the larger Waltham-style corporations found in northern New England: rural mills often claimed to improve the character of workers by combating vice, ignorance, and poverty, while Waltham-style mills promised to maintain the high character of their workers, and eventually return them to their farms with “unsullied reputation” (p. 114).

were confronted with the same labor shortage that they faced in Waltham. Once again, the Associates opted to employ young unmarried women, offering them the same types of benefits as were available in Waltham. However, as Coolidge (1993) points out, there is no evidence that Francis Cabot Lowell ever visualized the exact form that his factory community would assume. This is especially true in Lowell, where Francis Lowell's concept of a model industrial community was interpreted and executed by Kirk Boott, selected by the Boston Associates to build and manage their mill town on the Merrimack.

In his study of the Boston Associates, Dalzell (1987) offers a different interpretation to explain their paternalism in Waltham and early Lowell. He doubts that these "tough-minded businessmen" had any thoughts of creating an industrial utopia (p. 4). Dalzell also acknowledges that to attract workers, the Associates were obliged to create a pleasant work environment for their factory operatives. These concerns, however, were secondary to what mattered most to them: security for themselves and their descendents. Based on their observations in England, Dalzell asserts that Lowell and Appleton were worried about "the dangerous potential of industrialization to undermine the peace and traditional order of society" (p. 13). They recognized that the growing gap between rich and poor could result in major societal upheaval. To prevent this threat from materializing, thereby securing their position at the apex of the social order, the Associates were willing to expend considerable sums of money to provide their mill operatives with good pay and pleasant working conditions.

One of the most important aspects of corporate paternalism in Waltham was the interest shown by the Boston Associates in promoting education. In their accounts of the Industrial Revolution, historians typically mention the public schools, library, and lyceum established by the Boston Manufacturing Company only in passing (Dunwell, 1978; Ware, 1931). Wright (1973) asserts that the Associates believed that it was their duty as owners of the Boston Company to "direct and influence the education, morals, and general

beliefs of their operatives” (p. 12). More cynically, Gitelman (1967) claims that the Boston Company supported education in Waltham primarily to serve its own needs. He dismisses any possibility of altruism on the part of the Associates, pointing out that the “Sunday schools and reading rooms and elementary schools provided to some extent out of company funds” were also supported with tax dollars (p. 235). Gitelman goes so far as to argue that the Associates deserve little credit for the educational facilities because they would have eventually been established even without corporate support.

Seth Luther, a labor reformer from Providence, Rhode Island, provides the most negative view of the Boston Associates. Based on his visit to Waltham, Luther considered the idyllic image of the Boston Manufacturing Company to be a carefully crafted illusion, little more than a Potemkin village behind which lurked every imaginable evil. Sarcastically acknowledging the tributes of visitors to the Boston Manufacturing Company, Luther (1833) referred to the Waltham factory as “that pink of perfection” (p. 18) where there was a “great cry about the schools, and lyceums, and books” (p. 28). Noting that the factory operatives worked “like slaves for 13 or 14 hours every day” (p. 18) Luther compared the Waltham workers to “Tantalus, up to the chin in water” (p. 29), with little spare time to indulge in the luxury of reading. When told by his mother that he could borrow books from the Manufacturers’ Library and read after work, young Nathaniel Banks (future Civil War general and governor of Massachusetts) responded, “There will be scarcely any time for me to read after coming out of the factory at seven o’clock; and besides, after working from five o’clock in the morning until seven at night, I think I shall like the bed better than books” (Thayer, 1863, p. 98). Although highly unlikely that 11-year old Nathaniel ever uttered these exact words to his mother, the apocryphal passage does illustrate the inherent contradiction between the factory’s long hours and its willingness to provide educational benefits to employees.

Historical Studies of the American Industrial Revolution:

The Local Perspective

Considering the significant role played by the Boston Manufacturing Company in the industrial history of the United States, it is not surprising that local historians have told, and re-told, the story of the company's founding and its impact on the Waltham community. What is surprising is that these accounts of the Boston Manufacturing Company are imbedded within larger historical studies of Waltham. The full story of the Waltham company from its founding in 1813 to its bankruptcy and liquidation in 1930 has yet to be told.

When discussing the history of the Boston Manufacturing Company, Waltham historians have focused their attention on the antebellum period, paying particular attention to its first ten years in business (1814 – 1824). The founding of the company by Francis Lowell, his decision to hire female workers and provide them with company housing, and the system of corporate paternalism used in managing the company, are topics that have been covered in depth (Nelson, 1879; Petersen, 1988; Sanderson, 1957). Also, local historians have chronicled the history of the Rumford Institute for Mutual Instruction, a lyceum established in 1826 under the aegis of the Boston Manufacturing Company (Nelson, 1879; Starbuck, 1917; Warren, 1893). The most detailed account of the Institute's history is contained in a paper presented to the Citizens' Club in 1893. In this paper, Warren (1893) notes that the Boston Manufacturing Company provided substantial financial support for the new lyceum, going so far as to construct Rumford Hall, which was rented to the Institute for a nominal annual sum of \$60. The \$60, in turn, was to be used to purchase books to establish a library for members of the Institute. According to Warren (1893), the establishment of the Rumford Institute and library is evidence of the "generous and commendable zeal of the Boston Manufacturing Company for the welfare of the community and the moral and educational improvement of its operatives" (p. 12).

Unfortunately, local historians have not researched Waltham's factory-supported schools in any depth. Rather, they have left us with random facts and isolated fragments of information.¹⁴ For example, Stone, Warren, and Armstrong (1893) mention that Patrick Tracy Jackson served as a member of the school committee, and that the factory bell was rung at 8:45 in the morning to summon children to school. Other historians have provided vague accounts of the company's financial commitment to the public schools (Nelson, 1879; Rutter, 1877), or simply mention the locations of the schools and their dates of construction (Barry, 1887; Petersen, 1988). What took place on a daily basis in the classrooms of the factory-supported schools is never mentioned.

One might expect to find some degree of resentment among local historians towards the wealthy outsiders who transformed Waltham from a small farming village into a bustling industrial town. Such is not the case. Rather, local historians universally praise the Boston Associates for their efforts in support of education in Waltham and attribute only the purest of motives to their actions. In a historical address celebrating the centennial anniversary of the United States, Rutter (1877) set the tone for future Waltham historians by recognizing the harmonious relationship that existed between the factory and the community, and asserting that the Boston Company provided financial support for education so as not to burden the town. Barry (1887) also implies that the corporation established schools in order to assist the community when it was "poor in purse and population" (p. 70). In a similar vein, a number of local historians claim that the Boston Associates supported education in Waltham out of concern for the welfare of their workers (Barry, 1887; Nelson, 1879; Warren, 1890). Acknowledging the "high

¹⁴Some local historians have also presented erroneous information about the factory-supported schools. For example, Nelson (1879) claims that the school on Elm Street was "maintained at the company's expense for more than ten years" (p.131) despite company records indicating that the town subsidized the factory schools. In another account, a description by a local minister of a school built by the Waltham Cotton and Wool Company is mistakenly used to describe the first school established by the Boston Company (Woytanowitz, 1978).

purpose and grand object” of the Boston Associates in supporting education in Waltham, Stone et al. (1893) reflect the sentiments expressed by many local historians when they state, “What a noble policy! How grandly it stands forth after the lapse of three-quarters of a century! All honor to the men who thus ennobled labor and added to its dignity all the sweet influences of culture and refinement!” (p. 57).

Patriotism is another quality that local historians attribute to the Boston Associates. Warren (1890) argues that Francis Lowell was very cognizant of the link between England’s national greatness and her manufacturing capacity, and, consumed with “patriotic devotion to transfer some of that power to his native land” (p. 714), began laying the groundwork for his factory in Waltham. Stone et al. (1893) also believe that the Associates were patriotic men motivated by a desire to strengthen the United States. They refer to the Associates as “great exponents of our national enterprise and character,” and call Nathan Appleton the “far-seeing and patriotic merchant of Boston” (pp. 54-55).

Some local historians have also implied that the Boston Company’s generosity to the community was due, at least in part, to its on-site management. In textile mills organized according to the Waltham system, the company president presided at meetings of the board of directors, while the treasurer (operating from his Boston office), functioned as the company’s chief executive officer. Day-to-day management decisions were delegated to the on-site company agent (Dalzell, 1987). Throughout much of the antebellum period, Dr. Ebenezer Hobbs and Isaac Mulliken served as agents of the Boston Manufacturing Company and the Waltham Bleachery and Dye Works, respectively.¹⁵ Dr. Hobbs was a graduate of Harvard Medical School and a practicing physician in Waltham when he was hired by the Boston Manufacturing Company in 1819 (Mailloux, 1957). One of the wealthiest men in Massachusetts, Hobbs was instrumental in the founding of the

¹⁵ The Waltham Bleachery and Dye Works was constructed by the Boston Company in 1819 about a mile downstream on the Charles River.

Rumford Institute for Mutual Instruction, and served the local community as an officer in the Waltham Social Club, and as an assistant engineer in the Waltham Fire Department (Petersen, 1988). Rutter (1877) attributes the harmonious relationship between the Boston Company and the town of Waltham to Hobbs and Mulliken, claiming that these men “felt a warm interest in the welfare and prosperity of the town, and as occasion allowed, exerted an influence in its favor” (pp. 17-18). Warren (1893) also claims that Hobbs was interested in the “moral and intellectual welfare of the operatives and of the community” (p. 8).

To some degree, the effusive praise and glowing accounts written by local historians to describe the Boston Associates and the Waltham company must be taken with a grain of salt. After all, local historians often engage in hometown boosterism while turning a blind eye toward the faults and failures of prominent citizens. Proud of their city’s role in the Industrial Revolution, local historians have often romanticized its past and lionized the entrepreneurs who brought fame to their community. What is striking, however, is the complete absence of any criticism of the Boston Associates and the Boston Manufacturing Company by local historians and townspeople over the past two hundred years!

Such is not the case in Lowell. Seeking greater waterpower than could be provided by the Charles River, the Boston Associates began purchasing land along the Merrimack River in East Chelmsford with an eye toward establishing textile mills that would replicate their success in Waltham. In 1822 they incorporated the Merrimack Manufacturing Company, the first of many large corporations founded to mass-produce cotton cloth. In 1826, the factory village was incorporated as the town of Lowell, named in honor of the late Francis Cabot Lowell (Miles, 1846/1972). The phenomenal growth of Lowell over the next twenty years was unparalleled in American history; visitors came from far and wide to see for themselves “the most astonishing industrial city in American history” (Dunwell, 1978, pp. 35-37). In Lowell, the Waltham system reached its apogee.

However, although the Waltham and Lowell factories were established by the same group of men, historians have been much more critical of the actions of the Boston Associates in Lowell than they have been of their actions in Waltham. In a discussion of a dispute over school funding, a nineteenth century Lowell historian depicts company executives as small-minded, vindictive men who had nothing to do with “the schools thus erected contrary to their sovereign will and pleasure” (Cowley, 1868, p. 105).¹⁶ Josephson (1949) is particularly cutting in her criticism. She asserts that in its first 20 years, Lowell expanded too quickly, resulting in overcrowded conditions and “centers of squalor that could no longer be contained” (p. 204). While the Lowell corporations may have built schools in their first years of operation, they “were not interested in education per se, and were determined to transfer the expense and the responsibility to the town as soon as possible” (Josephson, 1949, p. 45). As for the Associates, Josephson portrays them as greedy, conniving absentee owners with no interest in the well-being of their factory operatives. Weible (1991) is also highly skeptical of corporate benevolence in Lowell. In an article describing East Chelmsford before the arrival of the Boston Associates, Weible accuses Appleton of deliberately distorting history to protect his own reputation and showing “callous indifference to the people whose land he and his colleagues bought and developed, essentially to maintain their own wealth and status” (p. 26). Weible also asks historians to pay attention to the community’s point of view rather than “trying to validate the national significance of historical melodramas like Appleton’s” (p. 26).

It is also interesting to examine historians’ reactions to Kirk Boott, the man selected by the Associates to oversee all facets of their operations in Lowell. A man of considerable talent and great energy, Boott was the driving force who transformed Lowell into the most remarkable industrial city in the United States. While some historians

¹⁶ Cowley is referring to Kirk Boott and other corporation executives. Earlier, Cowley (1868) praises the original founders of Lowell: “How mindful they were of the well-being of their operatives!” (p. 60).

offer qualified praise for Boott's tenure in Lowell (Gregory, 1975; Miles, 1846/1972; Parker, 1985), others criticize him as an overbearing, willful, and arrogant man ready to do whatever was necessary to achieve his (and the Associates') objectives (Cowley, 1868; Dunwell, 1978; Josephson, 1949; Lipchitz, 1976). Parker (1985) is certainly correct when he states that Boott "has come down to the present generation, in a number of respects, as a dictatorial ogre with few redeeming qualities" (p. 48). One can only speculate as to whether some of the criticism of early Lowell would have been muted had a more tactful man than Boott been the public face of the Boston Associates. What if the Associates had put Boott in charge of operations in Waltham and transferred the highly respected Dr. Ebenezer Hobbs to serve as company agent in Lowell? How would history have played out under these circumstances?

Literature Review Discussion and Conclusion

This literature review discussed the two dominant interpretations of the history of American education: the democratic-liberal interpretation and the revisionist interpretation. These interpretations provide a theoretical framework through which to examine the public schools and other educational institutions established by the Boston Manufacturing Company in antebellum Waltham. The large body of socio-cultural historical research focusing on the beliefs and values of the Boston Associates is useful in determining why these men were willing to provide financial support to local educational institutions for an extended period of time. There also exists a great deal of historical research on the early years of the Industrial Revolution which includes detailed accounts of the establishment of the Boston Manufacturing Company and its significance in American history. In addition, Waltham historians offer a local perspective from which to view the Associates and the Boston Manufacturing Company.

The literature review illustrates major gaps in our knowledge of the educational

institutions established in Waltham by the Boston Manufacturing Company and the reasons why these institutions were established. The historical research that does exist is superficial and often inaccurate. Fortunately, many of the documents needed to examine these educational institutions still exist. This study adds to the historical record by providing a detailed account of the establishment and workings of the factory-sponsored public schools, library, and lyceum in Waltham. It also adds to the existing body of research on the complex relationship between industrialization and education in antebellum New England.

CHAPTER 3: RESEARCH DESIGN

Method

To describe the public schools, library, and lyceum established by the Boston Manufacturing Company and determine why the Boston Associates funded these educational institutions, I analyzed five collections of documents: the archives of the Boston Manufacturing Company, the personal papers of the Boston Associates, the annual reports issued by the Waltham School Committee, government documents including the minutes of Waltham's monthly town meetings and reports issued by the Massachusetts Board of Education, and various local and national newspapers. Each set of documents illustrated some aspect of corporate involvement in education in antebellum Waltham, a topic that has previously been investigated in only a perfunctory manner.

Fortunately, as the Boston Manufacturing Company skidded towards bankruptcy in the 1920s, the corporation, cognizant of its unique role in American history, donated its papers to Harvard University. These records, meticulously documenting the expenditures and history of the corporation from its founding in 1813 through the decision to liquidate in 1929, were not intended for the general public. Rather, they were compiled for the benefit of the company's officers and shareholders. This extensive collection of corporate documents, including journals, administrative reports, minutes of directors' meetings, and financial records, comprises a rich source of data that was used to determine the extent of company involvement in education in Waltham. The records list all expenditures made by the Boston Manufacturing Company including teachers' salaries, school operating expenses, and schoolhouse construction costs.

While useful in determining the extent of corporate involvement in education, the company records are silent as to why the Boston Associates chose to appropriate company funds to support schools, a library, and a lyceum. The personal papers of the

Boston Associates, housed in the archives of the Massachusetts Historical Society, helped illustrate their motives. Although this collection has been carefully studied by historians interested in the Industrial Revolution and in the Associates themselves (Bender, 1975; Dalzell, 1987; Greenslet, 1946; Gregory, 1975; Hartford, 2001), it has not been closely examined by educational historians. Of particular interest were the papers of Francis Cabot Lowell, the founder of the Boston Manufacturing Company, and Nathan Appleton, a prolific writer who penned numerous letters, articles, speeches, and pamphlets explaining his role in the American Industrial Revolution.

Three sets of documents were useful in describing the educational institutions supported by the Boston Manufacturing Company: the annual reports of the Waltham School Committee (first published in 1842), government documents such as the minutes of Waltham's monthly town meetings and the annual reports of the state Board of Education, and various local and national newspapers, particularly the weekly editions of the Waltham newspaper, *The Sentinel* (first published in 1856). Complete sets of these documents are located in the Waltham Public Library (with the exception of the state Board of Education reports housed in the O'Neill Library at Boston College, and various newspapers published outside of Waltham, which are found in the archives of the Boston Public Library). The annual reports of the school committee provided a summary of what took place in each of the town's schools in a given year including the names of teachers, a brief discussion of the level of academic achievement, and a description of the order and discipline in each classroom. Although relatively brief, the annual reports humanized Waltham's district schools, providing a glimpse inside the classrooms of a New England factory town in the first half of the nineteenth century. The minutes of the monthly town meetings and the annual reports of the state Board of Education helped determine the extent of support for public education in Waltham and provided additional information on the factory schools. Finally, newspaper accounts also provided information on the Boston

Manufacturing Company and its factory-sponsored schools and lyceum. Articles in *The Sentinel* often included commentary on the programs offered at the Rumford Institute, and described, to a limited extent, what was happening in Waltham's public schools. In addition, *The Sentinel* also published more substantial pieces including historical accounts of education in Waltham as well as the incredibly detailed personal reminiscences of James G. Moore, who attended the original factory school during the 1820s.

Methodology

Reading through the corporate records of the Boston Manufacturing Company (182 volumes including administrative records, journals, ledgers, cash books, and payrolls, plus 14 boxes of miscellaneous papers) would be a daunting task for even the most dedicated historian. Each volume is comprised of well over 100 pages of handwritten entries, leaving the researcher to contend with the penmanship of company scribes long since deceased. Fortunately, each volume and box is chronologically organized, with 77 volumes plus two boxes of documents dealing with the pre-Civil War era. As I read through this material, I transcribed verbatim all references to education. Expenditures were categorized in two ways: by year (1814, 1815, 1816, etc.) and by type (salaries, maintenance, supplies, construction, and miscellaneous). Categorizing expenditures by year allowed me to determine the ebb and flow of corporate support for public education over a period of 50 years. Categorizing expenditures by type shed light on the company's educational priorities. Together, the two categories illustrated the extent of the company's commitment to education in Waltham.

I then reviewed the personal papers of the Boston Associates to provide insight into their beliefs and motivation. This collection is also voluminous. For example, the personal papers of Nathan Appleton alone include business records, personal journals, letters, scrapbooks, and family manuscripts. As I examined these documents, I recorded

the document citation, type of document, author, intended reader, date, summary of contents, and specific references to education.

To investigate the factory-supported schools from a classroom perspective, I read the annual reports of the Waltham School Committee from 1842/1843 to the 1865/1866 school year, recording the date, names of School Committee members, school district (District 5 and District 7 were the factory schools), names of teachers, student enrollment, information on curriculum and pedagogy, information on discipline and management, information on the physical condition of the school, and relevant miscellaneous information. Unfortunately, the School Committee neglected to publish annual reports prior to the 1842/1843 school year, leaving no record of the first 25 years of the factory schools.

Government documents such as the minutes of town meetings and the annual reports of the state Board of Education often provided information on school finances, teacher salaries, and classroom enrollment. The town meeting reports record all votes taken in a given month, including the sum of money appropriated for education and the names of citizens selected to serve on various district school committees. I reviewed each month's report, recording the date of the meeting, signatures on the document, and votes taken on public education. I also read the annual reports of the state Board of Education (from 1837-1865), recording information on Waltham's factory-supported schools.

Issues of the local newspaper, *The Sentinel*, are another source of information on the public schools and lyceum in Waltham. I reviewed every issue of *The Sentinel* from 1856 to 1866, printing copies of stories pertaining to education in Waltham. Although the research questions deal with the involvement of the Boston Manufacturing Company in education prior to the Civil War, I also reviewed copies of the paper after the relevant time frame to see if there were any additional personal reminiscences or historical accounts pertaining to the factory schools. Unfortunately, *The Sentinel* was not published until

1856, a full 43 years after the incorporation of the Boston Manufacturing Company.

The establishment of the Boston Manufacturing Company in 1813 has been rightly recognized by historians as a significant event in American history. For the first time, all of the steps necessary to turn a raw material (cotton) into a finished product (cloth) were performed under one roof using waterpowered machinery. Less well known, however, are the long-term efforts of the Boston Associates to promote education in Waltham, a practice noticeably absent in other prominent mill towns. This study examined Waltham before the Industrial Revolution, the personal backgrounds of the Boston Associates, the establishment of the Boston Manufacturing Company, and the educational institutions founded by the Boston Associates in Waltham. It also investigated the changes that occurred in Waltham as a result of the Industrial Revolution and the reasons why the Associates were so generous in their support of education, thereby adding to our understanding of the impact of industrialization on education in the United States in the first half of the nineteenth century.

CHAPTER 4: WALTHAM BEFORE THE INDUSTRIAL REVOLUTION

From the comfort of the twenty-first century, it is certainly difficult to imagine the shock and sense of displacement that the first English emigrants must have felt as they began their lives anew in the Massachusetts Bay Colony. After enduring the harrowing voyage across the North Atlantic, these settlers found themselves in what William Bradford (1620-1647/1952) described as a “hideous and desolate wilderness, full of wild beasts and wild men” (p. 62) and bereft of family, friends, and all things familiar. Once in Massachusetts, there were houses to build, land to clear, and crops to plant. In addition, the Puritans who settled the various towns in Massachusetts had to adapt their lives to the unique features of their community’s geography. In the case of Watertown (which included present-day Waltham), Thompson (2001) echoes Governor Bradford’s description of Plymouth Plantation, referring to the “unprecedented challenge of surviving in what they thought of as a wilderness, among dangerous ‘savages,’ in a climate of lethal extremes” (p. 164). Today, the physical features of the landscape are often shaped to fit the contours of our lives. Inconvenient brooks lying in the path of development are concealed in hidden culverts, and hills that were once obstacles to travel are now ribboned with roads. However, from the arrival of the first Puritan settlers in Massachusetts until the beginning of the Industrial Revolution, the land (and climate) shaped the lives of the people – their work, their food, and even their attitudes – rather than the other way around.¹⁷ In the case of Waltham, the impact of geography was particularly strong, making the town and its people ideally suited for the role they were destined to play in the American Industrial Revolution.

¹⁷ In 1788, John Boies constructed a dam across the Charles River (at the future site of the Boston Manufacturing Company) in order to provide power for a paper mill (Sanderson, 1936). This was the first attempt in Waltham to adapt the town’s geography to meet human needs.

The Land

Since its earliest days as a precinct of Watertown, Waltham's history has been largely determined by its close proximity to Boston, rocky soil, and the Charles River, which flows through the southern part of the town. In 1631, Massachusetts Governor John Winthrop led a small party of men from Watertown to explore the land lying west along the Charles River. Impressed by the natural features of the landscape, Winthrop left behind a series of names that are still used today, including Beaver Brook and Mt. Feake.¹⁸ He described Beaver Brook as the "first brook, on the north side of the river," and gave it its name "because the beavers had shorn down divers great trees there, and made divers dams across the brook" (Winthrop, 1630-1649/1908, p. 73). After crossing the brook, Winthrop and his party "came to another high pointed rock, having a fair ascent on the west side, which they called Mount Feake, from one Robert Feake, who had married the governor's daughter-in-law" (p. 73). Mt. Feake's location in southwest Waltham indicates that Winthrop explored from the Watertown line to the western border of present-day Waltham. He made no mention in his journal of the 10-foot waterfall on the Charles River that would later become the site of the Boston Manufacturing Company. Therefore, it is safe to assume that Winthrop was not the first European to see the falls. However, long before Francis Cabot Lowell and his partners thought of using the river to power their factory, other settlers were struck by the natural beauty of the area, referring to it as "Eden Vale" after the Garden of Eden (Nelson, 1879). How ironic that some of the first "machines in the American Garden" were housed in a mill located in an idyllic area named after the Biblical Garden of Eden!

Despite its natural beauty, the land abutting the Charles River was of little interest to the Puritan farmers who settled the West Precinct of Watertown. According

¹⁸ Winthrop's exploration of Waltham is commemorated by a large statue of a beaver perched atop Waltham City Hall. The beaver also symbolizes the industriousness of the city's working class residents.

to the Reverend Samuel Ripley (1815), this land was “light, sandy soil, not very deep” (p. 262), and therefore not well suited for agriculture. Even the interior of the town was only “tolerably fertile,” making it difficult for the early settlers to eke out a living as subsistence farmers. Another obstacle facing the town’s farmers was the substantial number of hills found in northern and western Waltham including Prospect Hill, which, at 482 feet, is the highest point in the Boston area.¹⁹ Farmers also had to contend with a “cold east wind, which prevails in the months of May and June,” and large boulders that frustrated attempts to plow the virgin soil. However, unlike the poor soil and raw spring winds, at least the ubiquitous boulders had some redeeming value: they allowed farmers to clearly mark their property lines with stone walls, leading Ripley to assert that “probably few towns in the county exhibit more excellent walls” than Waltham (p. 262). Most likely Waltham’s yeoman farmers did not hold the stone walls in the same high esteem as did the Reverend Ripley. Rather, the walls were a constant reminder of broken plows and back-breaking labor in a town not well suited to the pursuit of husbandry.

Waltham as a Precinct of Watertown

Conflict Over Religion

From the time of Governor Winthrop’s exploration in 1631 until its incorporation as a town in 1738, Waltham was a sparsely populated precinct of Watertown. In its first two decades, Watertown seemed destined to become one of the most influential towns in Massachusetts Bay Colony. According to Thompson (2001), Watertown, at that time, was “on a par with Boston and Charlestown in the numbers and wealth of its population, the presence of a leading investor and assistant, the size and leadership of its church, and the diversity of skills and origins of its settlers” (p. 169). In addition, the town’s

¹⁹ According to Ripley (1815), “Formerly a large pine tree grew upon its summit, and was one of the first objects seen by mariners entering our harbor” (p. 267).

geography seemed well suited for future growth. Watertown was comprised of a vast expanse of land (including what is today Waltham and Weston, and parts of Belmont, Lincoln, and Cambridge), and was situated just below the first waterfall on the Charles River which allowed small vessels to travel inland from Boston. Watertown also had the most important westward trail in Massachusetts (the Boston Post Road, also referred to as the Great Road) running through its borders (Thompson, 2001). However, for a variety of reasons, Watertown never fulfilled its early promise, and instead took a back seat to such towns as Boston, Cambridge, and Charlestown, and was “barely mentioned in colony records or archives after 1660” (p. 170).

Overshadowed by other towns, Watertown turned inward. Its residents became parochial, content to bicker among themselves over issues of little importance. Grievances festered, while resentful residents often focused their attention on the real and imagined personal slights of their neighbors. A “highly charged” atmosphere of discord and conflict prevailed, resulting in Watertown becoming “a byword for belligerence” (Thompson, 2001, pp. 172-173).²⁰

In addition to petty arguments and personal squabbles, Watertown residents also fought over more substantial issues affecting the community as a whole. In 1691, the town was divided into three precincts – East, Middle, and West – which closely corresponds to present-day Watertown, Waltham, and Weston. The location of the meeting house in the extreme eastern part of the East Precinct became a flashpoint of contention, dividing town residents according to their place of residence. Even interventions by Governor Phipps, and later, the General Court, failed to resolve the dispute (Warren, 1890). In 1712, residents of the West Precinct, many of whom attended the more convenient

²⁰ Bailyn (1994) points out that seventeenth century Watertown society was not uniquely dysfunctional. Other Massachusetts Bay Colony towns that experienced a high level of division and discord were Boston, Springfield, and Sudbury. Thompson (2001) also acknowledges that “Watertown had no monopoly of discord” citing Hingham, Woburn, Salem, and Malden (among others) as towns riven by conflict (p. 173).

Sudbury meeting house, incorporated as the town of Weston (Nelson, 1879). The Middle Precinct now became known as the West Precinct. However, the “irreconcilable division of sentiment” (Warren, 1890, p. 704) over the location of the meeting house continued until town residents consented in 1720 to build a second church in the middle of the West Precinct (present-day Waltham).²¹

For the farmers of the West Precinct, Sunday trips to the meeting house located in the center of their tiny settlement provided their only relief from the day-to-day grind of working the land.²² The meeting house was the spiritual and social center of the community, a place for residents to hear the word of God preached from the pulpit and the gossip of neighbors whispered in pews. Just as importantly, the meeting house was the site of monthly town meetings when eligible voters would gather to discuss the issues of the day and exercise their right of self-government.²³

Conflict Over Education

Resolution of the meeting house controversy did not end the bitter dissension in Watertown among residents of the East and West Precincts. Just as the meeting house controversy subsided, residents began to argue over the location of the schoolhouse. To the pious Puritans who settled New England, education was more than simply a matter of learning the basics of reading, writing, and arithmetic; it was also indispensable for the salvation of souls. Direct access to the word of God, through literacy, was one means of

²¹ Today, a large stone commemorates the site of the original meeting house in Waltham. There is also an unpaved path nearby known as the Meeting House Walkway.

²² Until the arrival of the Boston Manufacturing Company in 1814, Waltham did not have a clearly identifiable town center. Isolated farms were scattered throughout the northern part of town along the border with Lexington while in south Waltham, nine taverns clustered along the Great Country Road (also known as the Boston Post Road) served people traveling west from Boston (Jaffe, 2010).

²³ After concluding an agreement with the Boston Manufacturing Company, the town began using Rumford Hall for town meetings in the fall of 1832. The last town meeting held at the meeting house was held on August 7, 1832 (Town Meeting Warrants, 1810-1845).

protecting children from wayward interpretations of Christian gospel. Even after intense religious zeal fell into disfavor after the Salem witch trials (1692-1693)²⁴ and eventually mutated into a less doctrinaire form of Christianity known as “Congregationalism,” the emphasis upon education in the lives of young children remained universal and overt.

To safeguard children from the snares of “that ould deluder, Satan,” the Massachusetts General Court enacted legislation in 1647 requiring any township with 50 or more families to “forthwith appoint one within their towne to teach all such children as shall resort to him to write and reade” (Massachusetts School Law, 1647/1974, p. 394). Two years later, a school was built in the eastern section of Watertown, but the children of the western section were underserved for many years (Sanderson, 1936). In 1729, a long-running dispute began between residents of the East and West Precincts over the location of the town school. Upset by the distance their children had to travel to attend school, residents of the West Precinct voted to accept an offer by Allan Flagg “to give a convenient spot on his land near the north end of his orchard” to construct a school house (Mixer, 1913, p. 63). However, the town declined to accept Flagg’s offer and refused to appropriate money to build a school in the West Precinct (Starbuck, 1890).

Enraged by the town’s intransigence over the construction of a new school (and most likely still smarting over the recently concluded battle over the meeting house), West Precinct residents voted on May 1, 1730, “to be set off for a township by themselves... so that Learning may be Advanced amongst us” (Mixer, 1913, p. 76). In an effort to end the controversy and thereby avoid the division of Watertown, the General Court recommended that the town provide two schools and hire two teachers, one for each precinct (Starbuck, 1890). In 1733, “after many years of strife” (Sanderson, 1936, p. 48), the town finally appropriated 60 pounds to build a new schoolhouse in the West

²⁴ According to John Demos (1982), there was one accusation of witchcraft in Watertown against Alice Stratton in 1650.

Precinct and repair the old schoolhouse in the East Precinct. The following year, Joseph Wellington was chosen as the West Precinct's first schoolmaster (Sanderson, 1936).

Despite the successful resolution of the school controversy, the relationship between the two Watertown precincts continued to deteriorate. Years of dissension and discord had taken their toll; there was simply too much bitterness for the two precincts to remain unified as one town. A dispute over how to divide the proceeds from the sale of excess land proved to be the final straw, and on January 15, 1738, the West Precinct of Watertown was incorporated by the General Court as the town of Waltham.²⁵

At the time of its incorporation, Waltham was comprised of approximately 90 farmhouses widely dispersed throughout the town (Stone et al., 1893). The lack of a clearly defined town center made it difficult for children to attend the one centrally located schoolhouse. Therefore, to accommodate the inhabitants of outlying areas, Waltham was divided into three school districts. The schoolmaster was required to teach in the schoolhouse part of the year, and teach in private houses known as "moving schools" at other times (Sanderson, 1919). Apparently, the residents of Waltham were more interested in the location of the schoolhouse than in the quality of instruction, since the town's first action in regard to education was to order the selectmen "to treat with Mr. Timothy Herrington, and agree with him if they can to keep the School for one Quarter of a year as cheap as they can" (Nelson, 1879, p. 71). The experiment with "moving schools" must not have been wholly satisfactory, for it was discontinued in 1742, although it was then re-established in 1747 (Nelson, 1879; Starbuck, 1890). Finally, in 1772, a schoolhouse was constructed for children living in north Waltham.²⁶ Three years later, the town voted

²⁵ The origin of the name "Waltham" remains a mystery. Historians have speculated that the town may have been named after one of six Walthams in England, or because waltham means "forest home" in old English (Nelson, 1879; Sanderson, 1936; Warren, 1890). The Saxon translation of "forest home" is wald heim.

²⁶ Although this schoolhouse was privately constructed, the town voted to purchase it from its proprietors in 1791 (Starbuck, 1890).

to tear down the old schoolhouse and use whatever materials could be salvaged to build a new school near the meeting house. A third school was also constructed “at the Foot-of-the-hills” in northwest Waltham (Sanderson, 1936, p. 55). To accommodate the growing population in west Waltham, a fourth school district was established in 1785 (Starbuck, 1890).

A lengthy description of the school “at the Foot-of-the-hills” during the 1790s, based on the reminiscences of a former student (who signed the article with his initials, “C. P.”), was published in the *Waltham Sentinel* in 1857. Although it is only one person’s account related 60 years after the fact, the description provides some sense of what Waltham’s district schools were like in the late eighteenth century. C. P. described the schoolhouse as a small, one-story, unpainted wooden building lacking even the most rudimentary conveniences. Inside, students sat on long wooden benches with a fireplace located on one side. The teacher’s chair and “rudely constructed” desk were the only pieces of furniture in the room. Blackboards, maps, and globes “were never heard of in those days,” and the 60 to 80 “scholars” shared “not more than half a dozen arithmetics [sic], and as many dictionaries.” The school day was supposed to be four hours long (10:00 a.m. to 2:00 p.m.); however, attendance was not taken and few students were punctual. In agrarian Waltham, the school calendar conformed to the rhythm of planting and harvesting. School was in session for three months during the summer and three months during the winter, and the curriculum limited to reading, writing, spelling, and arithmetic (C. P., August 21, 1857, p. 1).

C. P. also recalled very little teaching or learning taking place in his school. He described the classroom as a “beautiful specimen of a Babel harmony of sounds,” with students “speak[ing] out, across the room, correct[ing] each other’s mistakes, sometimes half a dozen speaking out at once, at the top of their voices.” Teachers were content to remain seated behind their desk, and with the exception of an occasional spelling bee

or reading lesson, made little effort to instruct their young “scholars.”²⁷ When students misbehaved, teachers made liberal use of a birch switch after first explaining to the class that the “punishment was for the good of the child.” Even the school committeeman who was supposed to oversee the operation of the school was, according to C. P., negligent in fulfilling his duties and was seen at the schoolhouse only once in 10 years. “Is it strange we did not make great scholars?” wondered C. P. after describing his dismal school days in late eighteenth century Waltham (C. P., August 21, 1857, p. 1).

Waltham’s Economy in Transition: From the End of the American Revolution to the Eve of the Industrial Revolution

From its incorporation in 1738 until the waning years of the eighteenth century, life went on as it always had in Waltham. The town did have a brush with fame at the beginning of the American Revolution when cannons and ammunition were stored in the meeting house in preparation for war with England. However, in early 1775, the cannons were moved further west to Concord and Worcester, communities deemed less vulnerable to a British assault from Boston (Warren, 1890). Had the cannons remained in their original location, perhaps the first shots of the Revolution would have been fired in Waltham.²⁸

It is highly doubtful that those residing in Waltham after the Revolutionary War

²⁷ Although C. P. recalled both male and female teachers in the “school at the foot of the hills,” throughout the 1700s most of Waltham’s teachers were young men who taught for a year or two before moving on to other work. Local farmers were often paid by the town to provide room and board to the teachers. For example, on February 13, 1783, the town agreed to pay Ephraim Pierce for “boarding John Remington during the time of his keeping school in said town it being eight weeks and a half, five pounds, one shilling, and two pence” (Ancient Documents, vol. 2, p. 8).

²⁸ According to historian David Fischer (1994), the alarm set in motion by Paul Revere and William Dawes on the night of April 18th, 1775, never reached Waltham, and thus, the town’s minutemen did not muster in time to participate in the first battles of the Revolution. However, Warren (1890) claims that 121 Waltham men were “under arms that day and did their country service. But what route they marched and what were the incidents of their service cannot be ascertained” (p. 712).

had any inkling that their way of life, and that of their ancestors, would soon be swept away by forces unleashed by industrialization. It is even more unlikely that any of the local townspeople suspected that Waltham, which was slow to muster at the beginning of the American Revolution, would be at the forefront of the American Industrial Revolution. However, in the 1790s, Waltham experienced its first significant changes since the arrival of the Puritans 150 years earlier. These changes helped prepare townspeople for the economic and social transformation that their community would experience after the opening of the Boston Manufacturing Company.

The Arrival of the Gores and the Lymans

Despite the hopes of those who fought in the Revolutionary War, victory over Britain did not usher in an era of prosperity in the United States. Rather, the new nation faced serious economic problems that threatened its very existence. American seaports were battered by the seizure of 2,000 ships during the war and by the closing of the British Empire to American ships after the war (Parson, 2009).²⁹ In Massachusetts, farmers were generally able to provide for their own needs but were not flourishing. Laboring under the yoke of heavy debt and high taxation, farmers faced the problem of coaxing crops from “cruel soil . . . rocky hills and dry gullies” (Handlin & Handlin, 1969, p. 60). Even the small industries that sprung up during the Revolution to meet domestic needs suffered in the postwar economy as British manufacturers flooded the American market with inexpensive goods (Ware, 1931). In addition, Americans from all walks of life faced the problem of runaway inflation caused in part by excessive debt, worthless paper money, and a lack of hard currency. The outbreak of Shays’ Rebellion in 1786 and the Whiskey Rebel-

²⁹ Many Massachusetts seaports suffered greatly as a result of the War for Independence. According to Handlin and Handlin (1969), “Towns like Manchester, Marblehead, Hingham, Wellfleet, and Truro and all of Martha’s Vineyard and Nantucket were hard hit. Nantucket’s 140 ships at the beginning of the war had fallen to ten by 1780” (p. 9).

lion in 1794 illustrated the precarious state of the American economy in the aftermath of the Revolutionary War.

The town of Waltham, just 10 miles west of Boston, was no different than any of the other small villages clustered around the state capital. Over the years, life had changed very little for the farmers who comprised the bulk of the town's population. Most faced the same degree of economic uncertainty as did their counterparts in other areas of the state. However, with the approach of the nineteenth century, there were indications that Waltham's days as an unassuming Puritan village of tidy farms and small shops were drawing to a close. In the early 1790s, wealthy Boston attorney and statesman Christopher Gore and his wife Rebecca acquired their "farm at Waltham" - 300 acres of highly cultivated land along the Boston Post Road (Pinkney, 1969, p. 49). When their original farmhouse burned down in 1799, the Gores constructed a palatial neo-classical brick mansion complete with oval rooms, King of Prussia marble floors, a large library, and a three-story spiral staircase (Treese, 1991). Originally built as a summer house, Gore Place (as it came to be called) eventually became the year round residence of the Gores.

Also in the 1790s, prominent Boston merchant Theodore Lyman and his wife Lydia purchased 150 acres of farmland in Waltham (which later grew to 400 acres) and hired Salem architect Samuel McIntire to design a country estate befitting their status as one of Boston's wealthiest families. Known as "The Vale," the Lyman property included an imposing Federal-style mansion, heated greenhouses, a deer park housing forty Bengal deer, numerous outbuildings, exotic plants, and professionally designed landscaping (Parson, 2009). In 1803, a visitor to the Lyman Estate from New York City claimed that the property was "the most beautiful place around Boston. . . . It surpasses anything of the kind I ever saw, beautiful serpentine river or brook, thickly planted with trees and elegant swans swimming about. You can't imagine: 'twas like enchantment" (Parson, 2009, p. 105).

Undoubtedly, as they mingled outside the meeting house on Sunday mornings, the residents of Waltham conversed about their new neighbors, the Gores and Lymans. After all, the Lyman Estate, with its Palladian design, grand entrance, and white marble bridge crossing Chester Brook, was clearly visible from the austere unpainted meeting house that served as the religious, social, and civic center of the community.³⁰ In addition, Christopher Gore himself - diplomat, governor of Massachusetts, and United States Senator - was a member of the Waltham congregation, and was often seen dressed in “long hose and silver shoe buckles, as he walked to the village church on Sunday mornings” (Olden Time, May 8, 1857, p. 1). Upon entering the meeting house, Gore conspicuously occupied the pew adjacent to Reverend Jacob Cushing’s pulpit. According to Nelson (1879), the Governor’s three-cornered beaver hat was always hung in a visible location, causing townspeople to feel “a natural pride in the reflection, that whatever honors and distinctions other towns and churches might claim, Waltham Church had the only cocked hat in the state” (p. 76).

Despite their vast wealth and exalted social status, the Gores and Lymans were never prominent in local affairs. Although both families employed numerous Waltham residents as farmhands and servants and paid their share of local taxes, they made no effort to dominate town government. Even had they wanted to, Christopher Gore and Theodore Lyman would have found it difficult to impose their will on long-time residents who were not the least bit cowed by the presence of the newcomers in their midst. In fact, when Theodore Lyman disputed Waltham’s right to tax his white marble bridge and deducted the amount from his tax bill, the town promptly confiscated his prized oxen and auctioned them off - to Mr. Lyman himself (Parson, 2009). Although Lyman won the

³⁰ A painting of The Vale circa 1800 shows the mansion surrounded by manicured lawns with the white marble bridge crossing Chester Brook. To the west of the mansion can be seen the simple Puritan meeting house. In the lower right corner of the painting is the house of the Reverend Jacob Cushing (Parson, 2009).

battle on principle, the unbowed townspeople still received their money.³¹

The arrival of Christopher Gore and Theodore Lyman was a turning point in Waltham's history. For the first time, town residents were exposed to men much different than themselves - rich, sophisticated men who were accustomed to the best in life; men of national prominence whose identity was shaped not in Waltham but in Boston. Christopher Gore and the Lyman family³² were also savvy enough to invest in the burgeoning textile industry, thereby increasing their vast wealth. With impeccable timing, Gore purchased ten shares of stock in the Boston Manufacturing Company in 1817, earning a 17 percent dividend on his original investment (Pinkney, 1969). Three years later, Gore purchased an additional forty shares of Boston Company stock at \$1,000 per share, and during the 1820s made substantial investments in the Merrimack Manufacturing Company and the Merrimack Locks and Canal Corporation of Lowell (Pinkney, 1969). Theodore Lyman's sons also invested in the Boston Manufacturing Company and other textile firms, thereby adding to the family fortune (Parson, 2009). Waltham residents, on the other hand, lacked the personal connections and financial know-how to profit from the investment opportunity occurring in their own backyard. Rather, they continued to earn a living tilling the soil, working as hired help at Gore Place and The Vale, and, with the coming of the Industrial Revolution, laboring in the mills.

The presence of the Gores and Lymans did more than just add some vicarious sparkle to the lives of local townspeople; their presence also prepared residents for the arrival of the Boston Associates fifteen years hence. In both cases, the outsiders were welcomed and their estates and mills became objects of local pride. However, despite the newcomers' wealth and sophistication, control over town government remained firmly

³¹ The town confiscated his oxen for a number of years until Mr. Lyman dismantled his bridge.

³² Christopher and Rebecca Gore had no children. After their deaths (in 1827 and 1834, respectively), Gore Place was purchased by Theodore Lyman, Jr., whose father built The Vale. After passing through a succession of owners, Gore Place became a museum in 1935. The Vale remained in the Lyman family until 1951, when it was deeded to the Society for the Preservation of New England Antiquities.

in the hands of Waltham's long-time residents. The mansion and mill owners wielded enormous power within their domains, but in town affairs, the townspeople held the upper hand.

First Steps Toward Industrialization

Living alongside Waltham's yeoman farmers (and its two gentleman farmers, Christopher Gore and Theodore Lyman) were a handful of men who operated small waterpowered mills serving local needs. Waltham's geography made these small mills possible, for they harnessed the power of the brooks that arose in the northern and western hills and tumbled southward until reaching the Charles River. In 1662, a fulling mill, later replaced by a grist mill³³ and saw mill, was established on Beaver Brook in what is now the Waverley district of Belmont (Nelson, 1879; Sanderson, 1936). Along Chester Brook in central Waltham stood a grist mill and malt mill, and further upstream near the Lexington line was a small woodenware factory manufacturing tools, mortars, pestles and rolling pins. Sanderson's (1936) claim that this company "may well be termed the pioneer of industrial Waltham" (p. 58) is most certainly an exaggeration, for the company was never more than a family owned business serving the local market.

The sluggish currents of Beaver Brook and Chester Brook guaranteed that only the most modest of mills would arise along their banks. However, the Charles River, which formed the southern boundary of Waltham and flowed from west to east, offered two significant waterpower sites. The larger of the two sites was located in central Waltham where the river fell 10 feet. It was first used by Milton paper manufacturer John Boies, who erected a dam and constructed a small paper mill in 1788. *The*

³³ The circular granite millstone from the grist mill can still be seen at the waterfall between two small ponds on Mill Street, Belmont.

Massachusetts Magazine (1793) described the site of Boies's mill as "one of the most elegant and delightful in the township of Waltham" (p. 195).³⁴ Following the lead of Boies, Christopher Gore also opened a paper mill in 1794 at a site in the extreme eastern corner of Waltham where the Charles River dropped three feet. Sanderson (1957) doubts that Gore ever personally managed his small paper mill due to his political obligations and his interest in experimenting with new farming techniques. In 1807, Gore sold his mill property, which was later purchased by a group of Boston businessmen who hoped to manufacture cotton and wool cloth (Sanderson, 1957).

In February 1810, the Waltham Cotton and Wool Factory was constructed on the site of the Gore paper mill. Although in business for less than a decade, the importance of this company should not be minimized. As Waltham's first large-scale business, the Cotton and Wool Company was a bridge linking the town's agrarian past with its industrial future. Reverend Ripley (1815) described the factory as

a large wooden building of four stories; there are besides four dwelling houses, two of them very large, for the convenience of the people, a large store and warehouse, dye house, grist mill, mechanick's [*sic*] shop, woolen factory, weaver's and school house. (p. 264)

More than 200 people worked in the company's mills, spinning 300 pounds of cotton and 60 pounds of wool per day (Ripley, 1815). These figures are certainly impressive when one considers that there were only 1,250 people living in 120 houses in all of Waltham in 1815 (Ripley, 1815). However, in comparison with the size, number of employees, and

³⁴ Accompanying the short article on the Boies mill in *The Massachusetts Magazine* was a black and white drawing of the area with the caption "Eden Vale in Waltham." The illustration shows the Boies mill (with a waterwheel) nestled along the banks of the Charles River. Three small farmhouses are seen in the distance, and the spire from the meeting house rises among the trees.

daily production of the Boston Manufacturing Company, such figures seem as quaint as Christopher Gore's tri-cornered beaver hat hanging in the Puritan meeting house on Sunday mornings.

The interest that the Waltham Cotton and Wool Company took in its employees can also be seen as a precursor to the more advanced system of corporate paternalism practiced by the Boston Manufacturing Company. Both companies provided housing for their employees and both insisted on hiring people of strong moral character (Appleton, 1858; Ripley, 1815). Most significantly, both companies also built public schools to serve the educational needs of local children.



In the almost 200 years between the expedition of John Winthrop in 1631 and the establishment of the Boston Manufacturing Company in 1814, there was a confluence of circumstances that made Waltham ideally suited for the role it would play in launching the American Industrial Revolution. The town's marginal soil and numerous hills made farming difficult, guaranteeing that industry would face minimal competition from agriculture in an era of scarce labor. In addition, there were two significant waterpower sites along the Charles River in Waltham, both of which were a stone's throw from the Great Road, thus allowing easy access to and from the port of Boston, a distance of only 10 miles.

The industrialization of Waltham, however, cannot be attributed solely to its geographic advantages. The human element also has to be taken into account.³⁵ In order to succeed, the Boston Associates required people who would welcome their presence and accept mill work as an honorable vocation. The arrival of wealthy

³⁵ According to Baker (2003), the difference between geography and history is best "expressed in terms of history's focus upon periods and geography's focus upon places, fully recognizing that both periods and places were (and are) constructed and experienced by people" (p. 3).

Bostonians such as the Gores and Lymans during the 1790s prepared residents for the arrival of the Boston Associates in 1814. In addition, local townspeople, hardened by years of arduous labor in the fields, instinctively understood that factories offered another opportunity to earn a living. Mills became objects of civic pride, and residents reveled in their town's reputation as the birthplace of the American Industrial Revolution. The city seal, with the Boston Manufacturing Company pictured on the top and the Waltham Watch Company shown on the bottom, indicates the extent to which Waltham embraced its industrial heritage.

With its underutilized waterpower and willing populace, Waltham was ready to assume its role in the second American Revolution. What was needed was an individual with the ability to conceptualize the process of large-scale manufacturing and with access to the financial resources needed to industrialize.

CHAPTER 5: FRANCIS CABOT LOWELL AND THE BOSTON ASSOCIATES

In 1789, Samuel Slater, a seventeen year old Englishman with an ambitious nature and a mechanical mind, disguised himself as a farmer to avoid suspicious customs agents and boarded a ship bound for New York, intent on introducing the Arkwright spinning system in the United States. After a brief stint in a New York mill, Slater contacted Moses Brown, a Rhode Island mill owner who had advertised for a knowledgeable mechanic with the ability to replicate the Arkwright system used in England. Brown agreed to hire Slater, promising him “the credit as well as the advantage of perfecting the first watermill in America” (Gordon, 2004, p. 91). Within a year, Slater was successful in his efforts and the new company, Almy, Brown, and Slater, was advertising its cotton yarns for sale, “far Superior and Cheaper than that spun by Hand” (Dunwell, 1978, p. 14).³⁶

Despite Slater’s successful act of industrial piracy, the United States still lagged far behind England in its ability to manufacture cloth completely by machine. One major stumbling block to attaining industrial self-sufficiency was the nation’s shortage of labor. At the time of the first federal census in 1790, slightly fewer than 4,000,000 people inhabited the vast expanse of land stretching from the Atlantic Ocean to the Mississippi River (Carter, 2006). The dearth of people led the British consul in Philadelphia to predict that

a series of centuries must elapse before this country will be peopled to such a degree as to make the encouragement of manufactures an object of necessary recourse; Agriculture will long continue the source from whence the mass of people

³⁶ In 1815, Slater rejected a proposal from British immigrant William Gilmore, who offered to build him a working power loom. Josephson (1949) points out that Slater’s caution and “lack of enterprise cost him the leadership of the industry, for in the very year that he refused Gilmore’s offer, Francis Cabot Lowell’s mill at Waltham went into production, spinning thread and weaving cloth under one roof” (p. 15).

will draw their subsistence. (Josephson, 1949, p. 12)

In addition to its meager population, the United States was also unable to replicate the power loom, a complex machine invented in Britain by Edmund Cartwright which allowed cotton threads to be woven into cloth. To preserve its lucrative monopoly in textiles, laws were passed in England forbidding skilled artisans and manufacturers from leaving Britain for any country outside the British Empire. Those found guilty of attempting to leave England to engage in manufacturing in a foreign country were stripped of their nationality and property, while recruiting agents were subject to twelve months in prison and a £500 fine (Jeremy, 1977). Such laws, however, were easier to enact than enforce,³⁷ and as was true with the spinning jenny, the plans for the power loom travelled across the Atlantic not sketched on paper but etched in the mind. In this case, in the unlikely mind of an American tourist turned industrial spy: Francis Cabot Lowell.

This chapter will investigate the life of Lowell prior to the establishment of the Boston Manufacturing Company, seeking to identify the people and events that were instrumental in developing his character and shaping his values. The early lives of two of Lowell's business partners and friends – Patrick Tracy Jackson and Nathan Appleton, both of whom were active in the founding and management of the Boston Company – will also be discussed to provide insight into the reasons for their support of corporate paternalism as practiced in Waltham.

Francis Cabot Lowell

The Forgotten Man of American History

In textbook accounts of American history, Francis Cabot Lowell has never

³⁷ Jeremy (1977) concludes that Britain was unsuccessful in preventing the export of industrial technology because “administering and policing the sort of protection envisaged by the laws required Draconian measures that public opinion would not tolerate and internal economic and social conditions could not support” (p. 34).

received recognition commensurate with the significance of his achievements.³⁸ Most anyone with a passing knowledge of American history can identify Samuel Slater, Robert Fulton, Samuel Morse, and Cornelius Vanderbilt. But Francis Lowell? Other than in essays on Boston society, Lowell and his achievements have been largely forgotten, pushed to the sidelines of the American experience. In fact, when Francis Lowell is recognized at all, it is often incorrectly – as the founder of Lowell, a city which did not exist until nine years after his death.³⁹

What accounts for this lack of recognition? For one thing, Francis Lowell died in 1817 at the age of 42, only three years after the Boston Manufacturing Company was founded. He lived just long enough to see that he was correct in believing that cloth could be profitably manufactured in the United States using water powered machinery, and that poverty and vice were not the inevitable companions of industrialization and urbanization. Unfortunately, Lowell's early death robbed him of the opportunity to use his considerable talents to influence the future course of the textile industry. Had Lowell lived another 30 or 40 years, perhaps he would have succeeded in mitigating the worst aspects of industrialization.⁴⁰

Another reason why Lowell's accomplishments in the Industrial Revolution have been largely forgotten is his own silence on the subject. His correspondence and papers reveal very little about his thoughts on industrialization during the critical years from 1810 to 1812 when he vacationed in England, and virtually nothing on his role in

³⁸ *The American Pageant*, a commonly used high school textbook in advanced placement United States history courses, includes fifteen lines of text on Samuel Slater and a picture of his Rhode Island mill (Kennedy, Cohen, & Bailey, 2006). Francis Cabot Lowell is not mentioned. There are fourteen biographies of Samuel Slater listed in Amazon.com. The first biography of Lowell was published in 2011.

³⁹ Typical of the misinformation on Francis Lowell is the assertion by Banner (1970) that Lowell was “the co-founder of the famous cotton manufactory in the town which bears his name” (p. 179).

⁴⁰ Or perhaps nothing would have changed. Quite possibly an elderly Francis Lowell, reflecting on his role in the Industrial Revolution, would have expressed sentiments similar to his partner, Nathan Appleton (1858), who wrote, “I naturally feel a degree of satisfaction, in the part which I have thus performed in the introduction of this manufacture, so important in every point of view to the interest of the whole country” (p. v).

establishing the Boston Manufacturing Company upon his return to the United States. Sphinx-like, Lowell never described his visits to English textile mills nor committed to paper his thoughts on the proper treatment of workers.⁴¹ Even after his factory in Waltham was up and running, Lowell never explained his willingness to forego corporate profits in order to provide amenities for employees. Only a handful of Lowell's letters on the Boston Manufacturing Company survive and these deal primarily with mechanical and business issues rather than working conditions in his Waltham factory. The historical vacuum created by Lowell's silence was filled by Nathan Appleton and members of the extended Lowell clan, who spoke with one voice, acclaiming Francis Cabot Lowell as the indispensable man of the American Industrial Revolution and the "informing soul" of the Boston Manufacturing Company (Appleton, 1858, p. 15).

There are a number of possible reasons to explain Lowell's reticence regarding his involvement in the development of the power loom and the founding of the Boston Manufacturing Company. While vacationing in England, perhaps Lowell neglected to mention the power looms he observed for fear of arousing the suspicions of British authorities. There is also the possibility that Lowell did write to relatives and friends regarding his thoughts on manufacturing, but these letters could have been either lost or destroyed.

The most likely explanation for Lowell's silence, however, lies in his own persona. Throughout his life, Lowell was a hardworking, driven man not given to introspection or self-promotion. Even as a college student, he pushed himself with little regard for his own well-being. His tutor, the Reverend Zedekiah Sanger, wrote to John Lowell, Francis's father, that "He has been as studious as I could wish. My only fear is that he would injure himself by his too close application [to his studies]" (FCL papers, MHS, folder 6.9, April

⁴¹ In the archives of the Massachusetts Historical Society, the only reference I found in which Lowell mentioned his visits to English textile mills was in a letter dated May 1811: "William Smith was very good showing us the town manufactories" (FCL papers, MHS, folder 6.13).

29, 1793). During his two year vacation in England, Lowell was exceptionally busy: corresponding with friends, business associates, and family members back home, touring textile factories, and plotting with Nathan Appleton on how best to introduce textile manufacturing in the United States. At the same time, Lowell was a dutiful husband and father, doing what he could to restore his wife Hannah's health. He wrote to Patrick Tracy Jackson that he and his wife walked "frequently almost daily four to six miles a day" (FCL papers, MHS, folder 6.9, November 2, 1810). He also had to make time for his four children, John, Susanna, Francis, and Edward, who accompanied their parents on the trip to England.⁴² Once back in the United States, Lowell maintained his frenetic work pace, devising the first large-scale, fully integrated factory in the United States from scratch. Surely such a complex undertaking must have consumed a great deal of Lowell's energy, leaving him with little time to record his thoughts and achievements.

Lowell was aware that his obsession with work was detrimental to his health. In fact, shortly before his death, an unsigned letter to his older brother John states that Francis attributed his poor health to "having had so much business to attend to" (FCL papers, MHS, folder 9.4, August 4, 1817). Rosenberg (2011) hints at Lowell's compulsive work habits, concluding that he was "driven to attend promptly to his business commitments but was equally prompt in meeting obligations to family and friends" (p. 82), while Greenslet (1946) describes him as one of those "delicate and high strung men who work too hard" (p. 160). When Lowell died in 1817, he left behind a considerable legacy to be interpreted by others more interested than he was in the verdict of history.

Family Connections

The famous ditty that in Boston, "The Lowells speak only to the Cabots, and

⁴² When Francis and Hannah Lowell left Edinburgh to tour Scotland and England, their children were left in the care of Anne MacVicar Grant, a Scottish writer who spent much of her childhood in America (Rosenberg, 2011).

the Cabots speak only to God,” humorously refers to the elite status of these two old and venerable New England families. However, the ditty might just as well refer to the frequency of intermarriage among the Lowells, Cabots, and a handful of other families. According to Morse (1905), these families

had the satisfying belief that New England morally and intellectually had produced nothing better than they were; so they contentedly made a little clique by themselves, and intermarried very much, with a sincere and cheerful faith that in such alliances there could be no blunder. (pp. 9-10)

From the Revolutionary War through the nineteenth century, members of the Lowell and Cabot families, along with the Jacksons, Higginsons, and Lees, stood at the apex of Boston society. Their influence was all-encompassing, extending into the realms of shipping, law, politics, transportation, philanthropy, education, medicine, banking, theology, and with the advent of Francis Cabot Lowell, manufacturing (Dalzell, 1987). Undoubtedly, Lowell was an enormously gifted man who would have been successful had he been born into a less prominent family. It is also true, however, that Lowell’s family connections opened doors that would have remained closed to lesser mortals and provided the capital and expertise to successfully launch his entry into manufacturing.

Francis Cabot Lowell was descended from a family that arrived in Massachusetts and settled in Newbury in 1639. His grandfather, the Reverend John Lowell, was the first in the family to attend Harvard. He and his wife, Sarah Champney (the sister of a Harvard classmate), had two children, one of whom died in infancy. John Lowell served as minister to the Third Church of Newbury for forty-two years (Rosenberg, 2011).

John and Sarah Lowell’s son, John, also attended Harvard, and upon graduation

returned to Newbury to practice law. He married three times and fathered nine children, one of whom was Francis Cabot Lowell. His first wife, Sarah Higginson, died in 1772; his second wife, Susanna Cabot, died in 1777; and his third wife, Rebecca Russell Tyng, died in 1816. By the start of the American Revolution in 1775, John Lowell had sloughed off his earlier professions of loyalty to King George and become an ardent patriot. In 1777, he moved from Newburyport to Boston, allowing him to take full advantage of the leadership vacuum created by the Loyalists' exodus from the city. As a well respected lawyer, Lowell's rise to prominence in Boston was sudden and spectacular. He was a member of various Revolutionary War committees, helped draft the Massachusetts state constitution, served as a legal mentor to aspiring young lawyers including Harrison Gray Otis and Christopher Gore,⁴³ and was appointed judge for the district court of Massachusetts by President Washington. He died in 1802 at the age of 59 (Greenslet, 1946; Rosenberg, 2011).

In addition to the family connections forged by John Lowell through his three marriages, he also developed a close personal bond with Jonathan Jackson, his classmate at Harvard. Upon graduation, Jackson followed Lowell to Newburyport where he was employed as a clerk by Patrick Tracy, a merchant who had amassed a fortune trading with the West Indies. After the death of his first wife, Jackson married his employer's daughter, Hannah Tracy. They had nine children, including Hannah and Patrick Tracy. Hannah Jackson married John Lowell's son, Francis Cabot Lowell, and Patrick Tracy Jackson became Francis's trusted friend and business partner (Greenslet, 1946; Rosenberg, 2011). Thus the members of the Lowell and Jackson families were united by marriage, business, and friendship, a union that had important implications for the future of the

⁴³ Like their mentor, Otis and Gore were staunch Federalists. Christopher Gore eventually became a respected lawyer and mentored young Daniel Webster, who was a frequent visitor at Gore Place in Waltham. Gore later became an investor in the Boston Manufacturing Company, and Webster often served as the corporation's legal counsel. The personal, political, and business connections among these men illustrate the interlocking nature of elite Boston society in the antebellum era.

American economy.

Francis Cabot Lowell was born on April 7, 1775, the son of John and Susanna Cabot Lowell. His mother died on March, 20, 1777, and less than a year later, his father married Rebecca Tyng. According to Greenslet (1946), this marriage was “the happiest of his (John Lowell’s) alliances. Rebecca was charming, wise, and sympathetic” (p. 63). When John Lowell, Francis’s nine year old brother, met his new mother, he wrote in his diary, “If ever an angel appeared upon Earth, one has come down now!” (Greenslet, 1946, p. 63).

Not much is known of Francis Lowell’s childhood. Although born in Newburyport, he moved to Boston with his family in 1782. His father’s work as a lawyer and judge made him a wealthy man, allowing Francis and his eight siblings to grow up in affluent surroundings. Frequent trips to Bromley Vale, the Lowell country estate in Roxbury, provided family members with a respite from city life. Like his brother John, Francis deeply loved his father’s third wife Rebecca and embraced her as his mother. As a thirteen year old boy at Phillips Academy, Francis often wrote to Rebecca in beautiful penmanship, addressing his letters, “Honored Mamma,” and closing with, “I am, Honored Mamma, your most dutiful son, Francis Cabot Lowell” (FCL papers, MHS, folder 1.10). His affection for Rebecca and loneliness when away from home are evident in his letters. He once wrote to her, “I wish to answer your letters as soon as I receive them that I may receive more” (FCL papers, MHS, folder 1.10, September 27, 1788). On another occasion, Francis asked Rebecca to “please to come and see me; but do not forget to ask papa to come with you; if he cannot come please to come without him” (FCL papers, MHS, folder 1.10, November 19, 1788).

Harvard Years

In August 1789, “Francis C. Lowell” received his “Form of Admission,

Cantabrigiae Admittatux in Collegium Harvardinum” (FCL papers, MHS, folder 1.10, August 12, 1789).⁴⁴ His four years at Harvard laid the groundwork for his future success in business, both as a merchant and as a manufacturer. Lowell pursued a Bachelor of Arts degree, doing well in his study of Greek, Hebrew, Latin, English grammar, and history (Rosenberg, 2011). It was in mathematics, however, that he achieved particular distinction. One of his tutors noted that Lowell “has a happy genius for the mathematics. I presume few, if any of his class, equal him in mathematical and astronomical attainments. He is very accurate in calculating and predicting eclipses” (FCL papers, MHS, folder 1.14, April 29, 1793). Lowell’s “happy genius” for mathematics served him well in his business career: calculating profit margins and expenses as a merchant, and designing complex textile machinery as a manufacturer.

On the evening of December 26, 1792, in the middle of his senior year, seventeen year old Francis Lowell lit a bonfire in Harvard Yard. His participation in this seemingly trivial event had serious repercussions. President Willard and members of the faculty were not amused by Lowell’s youthful prank and suspended him for four months, during which time he was “put under the care of the Reverend Mr. Sanger of Bridgewater where he would study Blair’s lectures, projections of the sphere and spherical trigonometry, Ferguson’s astronomy, Burlamaqui on natural and political law, and Millot’s modern history” (FCL papers, MHS, folder 1.10, December 31, 1792).

Undoubtedly, as the son of a prominent Harvard graduate and Massachusetts judge, Francis Lowell was deeply embarrassed by his suspension and banishment from Harvard. He was brought up in a respected family that took itself seriously. Family members grew to maturity under the watchful gaze of distinguished ancestors whose

⁴⁴ Young Francis must have been fairly certain that he would gain admission to Harvard. He graduated from Phillips Academy in 1789 and passed the Harvard entrance examination. His grandfather, father, and brother John were all Harvard graduates. Also, Francis’s father served as treasurer of the college from 1784 until his death in 1802 (Rosenberg, 2011).

portraits adorned the walls of their Beacon Hill estate. Francis himself was the “dutiful son” of Phillips Academy days, carrying forth the hopes and expectations not only of the Lowells but of the Cabots as well. While his classmates completed their studies and reveled in the social life open to college students, Francis Lowell languished in Bridgewater, rarely emerging from his room in the Reverend Zedekiah Sanger’s household, focusing his considerable energy on mastering the curriculum prescribed by his professors, as if to atone for his sins. Three weeks after his exile to Bridgewater, Lowell wrote to his mother, telling her of his life “among entire strangers, and in a strange place,” and apologizing for not having written sooner because he “waited to recover my spirits, and feel myself at home.” He found the inhabitants of Bridgewater to be “very obliging,” and praised Mr. and Mrs. Sanger for trying “all in their power to entertain me.” Lowell concluded his letter by asking his siblings to write him, since “everything that comes from home will be amusing to me” (FCL papers, MHS, folder 1.13, January 23, 1793).

Of course, it is impossible to determine whether Lowell’s suspension permanently scarred his psyche. Rosenberg (2011) believes that it did. He refers to Lowell’s “wish to please his father, the demands of his conscience, and his obsessive need for order” (p. 62), and argues that the incident left him “emotionally brittle.” “All the rest of his life he could not be idle but needed to be busy and productive,” according to Rosenberg. In his surviving papers and correspondence, Lowell never referred to his suspension after leaving Bridgewater and returning to Harvard. In typical fashion, he moved forward, keeping his personal feelings locked within himself.

The Character and Values of Francis Cabot Lowell

In the years after his death in 1817, Francis Lowell’s friends and relatives eulogized him as a wise businessman, brilliant mathematician, and generous

philanthropist deserving most of the credit for launching the American Industrial Revolution. Nathan Appleton (1858), who was associated with Lowell as a merchant and manufacturer, claimed that he was “beloved and respected by all who knew him” (p. 15). Lowell’s nephew, John A. Lowell (1848), referred to his uncle as “an extraordinary man... with far reaching views” who died knowing that he had “succeeded in his object, and that the extension of the cotton manufacture would form a permanent basis of the prosperity of New England” (pp. 6, 8). American statesman Edward Everett (1843) praised Lowell for

the originality of his views, the clearness of his perceptions, the variety and accuracy of his knowledge, and his power of bringing it to practical results, and perhaps still more, for the sterling purity and integrity of his character. To him, more than to any other individual, is New England, or rather is America, indebted, for the permanent establishment of the cotton manufacture in this country. (p. xxx)

How valid are these glowing testimonials? Was the flesh and blood Francis Cabot Lowell as wise and upright as his friends and relatives would have us believe?

Lowell’s correspondence and papers illustrate a private man reluctant to reveal his inner thoughts to even his most trusted confidants. Unlike his older brother John, who reveled in his role as a defender of Federalist orthodoxy long after the party had sunk into oblivion, or his younger brother Charles, a Congregational minister who spoke out passionately against slavery and intemperance, Francis Lowell was silent on the major issues of the day (FCL papers, MHS). He was, however, a virtuous man whose decisions were based on his own sense of right and wrong. Lowell’s papers also reveal his love of country and strong sense of place. Rarely preachy and never self-righteous, Lowell was

Careful to couch his personal beliefs in the context of the great love of his life – business. There can be no doubt that first and foremost, Francis Cabot Lowell was a practical man of business, not a utopian idealist. While he always sought the best deal possible, he was also scrupulously honest in his business transactions and motivated by a strong sense of civic duty. In his personal life and professional career, Lowell was more closely aligned with the republican ideals of the post-Revolutionary War generation than with the greed and showmanship of later Gilded Age industrialists. More cautious than mercurial, more practical than philosophical, more of a realist than a visionary, Lowell pursued success in the business world with a steely, single-minded determination tempered by his own personal code of honor and decency.

The Beliefs of Francis Cabot Lowell

During his four years at Harvard, Lowell wrote a number of lengthy essays (now in the archives of the Massachusetts Historical Society) that provide an interesting glimpse into the thoughts and values he held as a young man.⁴⁵ The essays demonstrate Lowell's virtuous nature, sense of duty, and seriousness of purpose. In one essay, Lowell argues that it is never morally right to deliver an innocent citizen to an enemy to save the republic from imminent ruin, just as it would never be right for a man to kill his friend "whom he promised at all hazards to protect... Is it less criminal for one million to do so, than for one?" (FCL papers, MHS, folder 1.11, 1788-1793). Another essay is fascinating in light of Lowell's future business career. Discussing the relative merits of manufacturing versus commerce, Lowell comes down firmly on the side of the latter. Manufactories are useful, according to Lowell, only when a nation's commerce is sufficiently developed

⁴⁵ Lowell's essays were written on such topics as: "whether the works of nature excel those of art," "whether we ought to believe the Christian religion," "whether there be any difference in the happiness of mankind," "whether the desire of popular applause be detrimental to society," "whether it be morally right for the government to do wrong," "whether affluence be more productive of happiness than commerce," and "whether the soul always thinks" (FCL papers, MHS, folder 1.11, 1789-1793).

to “convey the surplus to other countries.” Otherwise, widespread unemployment will result since manufactories produce more goods with fewer workers than do small cottage industries. Interestingly, Lowell also argues against the corporate business model. Manufactories are “much better when owned by an individual than when owned by a corporation,” according to Lowell, since an individual owner will work harder knowing that he will garner all of the firm’s profits, whereas corporate owners receive only their proportional share of the earnings “whether (they) labor hard or not” (FCL papers, MHS, folder 1.11, n.d.). Lowell’s aversion to sharing profits with slothful partners may explain his insistence on restricting ownership of shares in the Boston Manufacturing Company to a handful of close relatives and trusted friends.⁴⁶

After graduating from Harvard in 1793, Francis Lowell embarked on a career as a merchant, first working for his father and then striking out on his own. In 1798, he married Hannah Jackson, thus solidifying the close bond between the Lowell and Jackson families.⁴⁷ Most of Lowell’s surviving letters from his years as a merchant are concerned with business matters. He wrote frequently to his uncle, wealthy Salem merchant William Cabot, and his business partner and brother-in-law, Patrick Tracy Jackson, on the buying and selling of goods. In these letters, Lowell occasionally referred to the personal qualities that he valued such as thrift, honesty, and integrity. He admonished Patrick Jackson to avoid financial speculation and conduct his business affairs “with strict honesty,” advising him to patiently accumulate wealth since “‘making too much haste to grow rich’ is the great stumbling block of enterprising men” (FCL papers, MHS, folder 6.17, November 16, 1811). Lowell encouraged his uncle to trust Benjamin Gorham because “it is not often you have the good fortune to be connected with men of such

⁴⁶ Only twelve men subscribed to the first issue of Boston Manufacturing Company stock. Half of the shares were owned by Francis Lowell and the Jackson family (Ware, 1931).

⁴⁷ Hannah Jackson was the daughter of Judge John Lowell’s close friend and confidante, Jonathan Jackson, and the sister of Francis Cabot Lowell’s friend and business partner, Patrick Tracy Jackson.

integrity, good sense, and good feeling.” In the same letter, Lowell questioned his uncle about his will, gently rebuking him for not leaving an equal share of his estate to Francis’s sister:

Where did you discover this selfishness in me to wrong a sister, one much more deserving, and who has more occasion of it than I have. Providence has bestowed on me as much of the riches of this world as I covet. You can add nothing to it. . . I desire you might not leave anything to me or my family. (FCL papers, MHS, folder 6.5, June 22, 1810)

Lowell’s letters reveal his love of country and strong sense of place. He praised former Secretary of State Timothy Pickering for having “that old fashioned integrity and patriotism which is so little known in modern days” (FCL papers, MHS, folder 6.7, August 27, 1810). As relations between the United States and Britain deteriorated prior to the War of 1812, Lowell encouraged his Federalist friends to remain loyal to the United States in the event of hostilities. He related an anecdote about “old Mr. Lechmere,” a loyalist during the Revolution who fled to England and “never regretted leaving Boston but once, and that is ever since. The example of the refugees should be a warning to our friends, if troubles come to stay by and fight it out” (FCL papers, MHS, folder 6.16, October 12, 1811). Lowell’s attachment to Boston is also evident in his letters. He asked his sister to write frequently of home, since “every new home that is built, every birth, every marriage, every courtship, and every death is interesting to us” (FCL papers, MHS, folder 6.9, Dec. 31, 1810). Lowell encouraged friends in Scotland to visit America, telling them they would be “particularly pleased with the intelligence of the common people in Connecticut and part of Massachusetts” (FCL papers, MHS, folder 6.13, June 5, 1811).

Undoubtedly, the “part of Massachusetts” referenced by Lowell was Boston and other long-established seafaring towns inhabited by his relatives and friends (such as Salem, Marblehead, and Newburyport).

Lowell’s letters also provide an interesting glimpse into his views on education. Robert Owen, the utopian British textile manufacturer with whom Lowell is often compared, considered education to be an indispensable component of social reform. He established two schools in New Lanark, Scotland, to implement his well developed educational philosophy (Browning, 1971). However, unlike Owen, Lowell did not articulate, and then implement, a comprehensive system of education.⁴⁸ Lowell was certainly interested in schooling, but there is no evidence that he had any interest in using education to transform society. In fact, his only comments on education reflect his patrician background and his own experiences in elite institutions such as Phillips Academy and Harvard College. While vacationing in England, Lowell took an interest in Augustus Thorndike, the son of a Boston friend who was sent to that country to attend school. He confided to his brother-in-law that young Augustus was “a very unruly boy... a lad of a good temper naturally but has not been kept under proper control.” Lowell wrote that young Augustus would benefit from the English school he was attending because of its strict discipline and competitive environment (FCL papers, MHS, folder 6.9, December 14, 1810). Writing to Augustus’s father, Lowell reported that the boy was making progress under the tutelage of a talented teacher. Then, in the blunt style of a bottom-line businessman,⁴⁹ he informed his friend that Augustus was

⁴⁸ According to Browning (1971), one reason why Owen opened a school for infants in New Lanark was to free their mothers to work in his factories. This echoes the argument of Gitelman (1974) that the Boston Associates opened schools as a means to attract workers to their Waltham mill.

⁴⁹ James Jackson Putnam (1905) defends Lowell’s penchant for blunt speech, pointing out that “few men ever lived who, with such entire freedom and unreserved, told their friends their faults with a view to their amendment. He was so constantly serving them that no one could doubt his motives” (p. 139).

much more difficult to control, than the lads of his age... He used a great many vulgar phrases, and much bad English in his common discourse...I have mentioned every thing [*sic*] that has occurred to me which your son has done amiss; as I should wish the same myself. (FCL papers, MHS, folder 6.11, Jan. 3, 1811)

Perhaps recalling his feelings of isolation during his own exile for misbehavior, Lowell softened the blow of his harsh words by encouraging the parents and siblings to write “very frequent and affectionate letters” to Augustus.

Although Lowell does not appear to have given much thought to district schools, he was very much interested in reforming higher education in the United States. In a remarkable letter written while vacationing in England, Lowell discussed his thoughts on improving education in American colleges. He noted that he had “talked and thought much... on what we have often conversed when in America, the reforms necessary to make our college the most perfect possible considering all the local disadvantages.” True to his business background, Lowell insisted that the changes should be practical⁵⁰ and have a definite goal: “to make the greatest number and at the same time some of the most profound scholars in the shortest space.” To achieve this goal, Lowell believed that teachers must excite their students in the pursuit of knowledge and also excite the public to become scholars. Demonstrating an understanding of the connection between teaching and learning, Lowell argued that professors with the ability to motivate students are more valuable than those “who are too lazy to excite people to learn” (FCL papers, MHS, folder 1.2, n.d.).

⁵⁰ In his letter, Lowell referred to Plato’s educational system, which he considered impractical. “But in forming our system let us not be led like Plato, to form it too much from our own brains, lest like him we form what can be of no Earthly use . . .” (FCL papers, MHS, folder 1.2, n.d.). How many people in business today would be able to discuss educational issues with reference to Plato?

Patrick Tracy Jackson

Background and Family Connections

Although Francis Cabot Lowell was able to conceptualize a fully integrated system of textile manufacturing, he was in need of someone with the administrative and personal skills to successfully manage his corporation on a day-to-day basis. Such a man was Patrick Tracy Jackson. It is difficult to conceive of two men more closely connected than Lowell and Jackson: their fathers were Harvard classmates and close friends; Francis and James Jackson (Patrick's brother), were Harvard classmates and close friends; Francis married Hannah Jackson, Patrick's sister; and Francis and Patrick were fellow merchants and business partners in Boston. Connected through business, friendship, and marriage, the two men complemented one another personally and trusted each other implicitly. Francis Cabot Lowell may have been the "informing soul" of the American Industrial Revolution, but it was Patrick Tracy Jackson who successfully implemented his friend's vision. His contributions to the industrialization of New England in the antebellum period were numerous and significant. He was an agent of the Boston Manufacturing Company for 13 years, "founder and guardian genius" (Putnam, 1905, p. 142) of the city of Lowell, agent of the Appleton Manufacturing Company of Lowell, and builder of the Boston and Lowell Railroad. To an even greater degree than Francis Lowell, Patrick Jackson's role in the Industrial Revolution has been largely forgotten.⁵¹

Patrick Tracy Jackson was born in Newburyport in 1780. After graduating from Dummer Academy, he became an apprentice to William Bartlett, a wealthy Newburyport merchant, and later successfully captained his brother Henry's ships bound for India.

⁵¹ There are no biographies of Jackson and no recent articles on his life have appeared in historical journals. John A. Lowell's (1848) *Memoir of Patrick Tracy Jackson*, a lengthy article written shortly after Jackson's death, is the most complete source of information on his life and career. Also, Jackson invariably appears in historical accounts of the Industrial Revolution as Francis Cabot Lowell's Sancho Panza, willing and able to carry out the plans of his friend and mentor. According to Putnam (1905), "Most of the early plans for the new business were furnished by Mr. F. Lowell. Mr. [Patrick] Jackson gave the most time and labour in conducting it" (p. 138).

Jackson's voyages to India provided him with first-hand knowledge of sailing as well as buying and selling goods in Asia. Upon his return to America, he moved to Boston to work as an assistant to Francis Lowell who had enough faith in Jackson's ability to leave him in charge of his affairs during his vacation in England (Lowell, 1848; Rosenberg, 2011). In 1810, Jackson married Lydia Cabot of Beverly, adding yet another layer to the multifaceted relationship between the Jackson and Lowell families (Briggs, 1927).

The Character, Beliefs, and Values of Patrick Tracy Jackson

The close personal and professional relationship between Francis Lowell and Patrick Jackson offers striking evidence that opposites do indeed attract. Lowell was a well educated, cerebral man with a precise mind who carefully calculated his options before deciding on a course of action. He was also, by all accounts, highly respected and admired by those who knew him. In fact, the prose used by contemporaries to describe Lowell is almost Washingtonesque in substance and in tone, making him appear larger than life; a marble statue of a man whose actions and motives were beyond reproach. However, what is conspicuously missing from these reverential accounts (and from his own correspondence) is any mention of Lowell's life outside of business and family. His feelings and emotions, hobbies and amusements, remain carefully concealed beneath a façade of honor and virtue.

Such is not the case with Patrick Tracy Jackson. Unlike Lowell, Jackson was more instinctive than cerebral, more comfortable in the world of work than in the realm of ideas. After Jackson's death, his brother, Dr. James Jackson, described him as "the working man, the industrious, indefatigable, energetic working man...He was made for a working man, not for a speculator in stocks" (Putnam, 1905, pp. 130, 141). Jackson's sister, Mary Lee, noted that her brother "loved to take the raw material and by the skillful treatment of it add to its value" (Morse, 1926, p. 59). Patrick Jackson's career as a

merchant and manufacturer validates his brother and sister's descriptions. According to John Lowell (1848), when Jackson first became apprenticed to a Newburyport merchant, he

took especial pains to prove to his master that he had not been educated to view as disgraceful which it was his duty to do. He took pride in throwing himself into the midst of the labor and responsibility of the business. (p. 4)

When the Boston Manufacturing Company opened in 1814, it was Patrick Jackson, not Francis Lowell, who moved to Waltham to serve as the company agent, managing the day-to-day operation of the mill (Sanderson, 1957). Even towards the end of his life, Jackson remained in the arena, overseeing the reconstruction of the Great Falls Manufacturing Company in Somersworth, New Hampshire, and serving as the company's agent and treasurer (Lowell, 1848).

Like Francis Lowell, Jackson also possessed the character and leadership qualities that facilitated his rise to prominence in the business world. After his death in 1847, Jackson's relatives and friends called attention to his honor and integrity, noting that he was more concerned with the financial interests of others than he was with his own (Lowell, 1848; Morse, 1926; Putnam, 1905). However, unlike Lowell, Jackson seems to have thoroughly enjoyed himself outside the narrow confines of the counting house. He had a buoyant personality and zest for living that, according to his granddaughter, "won the confidence, friendship, and esteem of everyone with whom he came in contact" (Morse, 1926, p. 53). Jackson's cheerfulness and likability were important assets when he moved to Waltham to serve as agent/treasurer of the Boston Manufacturing Company for its first 13 years. As a newcomer in a town long dominated by a handful of prominent

families, Jackson was the public face of the mammoth corporation so different than anything Waltham citizens had ever seen before. His election to the school committee in 1817 is a testament to his success in soothing the fears of local residents.

Jackson's interest in the well-being of others is also significant because of his stature within the Boston Company. As Lowell's brother-in-law and close friend, and as the largest individual stockholder in the company, Jackson was second only to Lowell in setting corporate policy in Waltham. Lowell's belief that workers should be well treated and provided with amenities in addition to their salaries resonated with Jackson, whose benevolent nature and genial disposition predisposed him in that direction. When Lowell died shortly after the Boston Company commenced operations, Jackson remained as agent and treasurer of the company for another decade, implementing his mentor's generous vision of corporate responsibility. According to his granddaughter, Jackson "had a most grateful heart, never forgetting the good services or even the good wishes of others toward him" (Morse, 1926, p. 58).

When Jackson chose to leave the comfort and culture of Beacon Hill and move to Waltham in 1814, the town was little more than a small farming village located along the Great Country Road. He moved into a house standing in the shadow of the Boston Manufacturing Company, on land that is now part of the Waltham Common. Gazing out his windows, Jackson would have been able to see the Long Block, a large two-story row house constructed by the corporation to house factory operatives. He also would have passed by the workers' tenements every morning on the way to his office in the mill. Living in such close proximity to the company's mechanics and mill girls undoubtedly gave Jackson a visceral understanding of the lives of his factory operatives. Employees were more than just faceless names found in company payroll ledgers. To Jackson, they were real people, his neighbors as well as his employees.

Nathan Appleton

Background and Family Connections

Along with Francis Lowell and Patrick Jackson, Nathan Appleton was the third member of the triumvirate responsible for establishing large-scale manufacturing in the United States. In the years immediately preceding the founding of the Boston Manufacturing Company, there were no clearly delineated areas of responsibility or lines of authority among the three men. Rather, Lowell, Jackson, and Appleton blazed a new trail in American business, improvising as they went along and not exactly sure of where they would end up. To engage in a bit of imperfect categorization, Francis Lowell was the visionary thinker who conceived an entirely new system of manufacturing; Patrick Jackson was the trusted friend who possessed the personal and managerial skills to implement Lowell's vision; and Nathan Appleton was the shrewd businessman whose expertise in finance and marketing ensured the success of Lowell's creation. Among the three men, however, there was never any doubt that Francis Lowell was the preeminent figure, the "informing soul, which gave direction and form to the whole proceeding" (Appleton, 1858, p. 15).⁵²

Although he was the son of a relatively prosperous New Hampshire farmer, Nathan Appleton did not enjoy the privileged upbringing or family connections of Francis Lowell or, to a lesser extent, Patrick Jackson. He attended the town school in New Ipswich, New Hampshire, before moving on to New Ipswich Academy. Even at a young age, Appleton demonstrated a particular aptitude for numbers. In his memoirs, Appleton recalls that he was "generally at the head of his class," and in algebra, he

⁵²Of course, Lowell was more than just a visionary thinker. He was also a brilliant mathematician, tireless worker, and well connected merchant whose business acumen and personal integrity were instrumental in the success of the Boston Manufacturing Company. Jackson was also highly respected, as comfortable discussing profit margins with investors as he was discussing textile machinery with mechanics. Appleton is arguably the most influential figure in New England business before the Civil War. He was also a prominent Massachusetts politician who vigorously promoted manufacturing interests during his two terms in Congress.

was told by his teacher that “he could go no farther with me; that I then knew as much as he did” (Winthrop, 1861, p. 11). At the age of 15, Appleton travelled by horseback to Dartmouth College to take his college entrance examination. He later wrote, with a tinge of sadness,

I was examined, and admitted to the freshman-class in Dartmouth College. It had, however, been decided, previously, that I should proceed no further in collegiate studies than the entry... Whether this proposal was thought more eligible than going to college by my father or myself, I cannot now say; but the result was, that it was determined that I should become a merchant, rather than a scholar. (Winthrop, 1861, p. 11)⁵³

Despite the premature conclusion of his formal schooling, Appleton’s informal education continued unabated. He followed in the footsteps of other ambitious young men (such as Lowell and Jackson), leaving his hometown and moving to Boston to begin his career as a merchant in partnership with his older brother, Samuel. Always eager to enhance his knowledge, Appleton learned the principles of bookkeeping from a roommate⁵⁴ and also became fluent in French (Winthrop, 1861). In 1801-1802, he traveled extensively through Europe, improving his understanding of international trade and business and even catching a glimpse of Napoleon (Winthrop, 1861). Appleton was appalled by the class distinctions and extremes of wealth he observed in England,

⁵³ In his memoir, Appleton does not elaborate on who made the decision to terminate his education. Winthrop (1861) speculates that Nathan’s father was either unable to afford his college education or that the death of one of Nathan’s older brothers soon after graduating from Dartmouth may have “damped [*sic*] his disposition for making scholars of the others” (p. 9).

⁵⁴ Appleton never underestimated the importance of bookkeeping in his success. He later wrote, “I have always attributed a great portion of the failures which take place to a want of attention, or a want of knowledge, in the proper principles of book-keeping” (Winthrop, 1861, p. 13).

noting that although money purchased a great deal of “attentions which we are without in America but as these are in great measure the consequence of the debasement of the lower classes of society, for the happiness of our country at large I could wish it long without them” (NA papers, MHS, folder 2.11, February 24, 1802). After returning to America, Appleton travelled through the southern states during the winter of 1804-1805, purchasing rice and cotton, getting his first glimpse of slavery,⁵⁵ and attending the impeachment trial of Supreme Court Justice Samuel Chase. Good Federalist that he was, Appleton heard “with much satisfaction of Judge Chase’s acquittal” (Tharp, 1973, p. 37).

The Character, Beliefs, and Values of Nathan Appleton

In the late 1850s, Nathan Appleton’s friend, Robert Winthrop, called on him at his Beacon Hill house. Winthrop (1861) describes Appleton as being in poor health and close to death. After exchanging pleasantries with Winthrop in the presence of his family, Appleton asked his old friend to join him in his small private library. Cognizant of his declining health and concerned with his place in history, Appleton asked Winthrop to “look after my memory after I am gone.” He was concerned that future generations would question his character and think that he had devoted his life to the accumulation of wealth. “Yet nothing is more untrue,” said Appleton.

It was wholly accident that I went into that business (textiles); and the truth is, that my mind has always been devoted to many other things rather than money-making. That has never been a passion with me, or ever a subject of much concern.

⁵⁵ While in Charleston, Appleton presciently wrote in his journal, “Here for the first time, I saw the horrid sight of the sale of human flesh. . . Cargoes of them are now offered for sale in this place to the present disgrace of the United States and probably future destruction of many of its citizens” (Tharp, 1973, p. 35).

Accident, and not effort, has made me a rich man. (pp. 60-61)

To a large extent, Appleton's introspective analysis of his own life rings true. Although newspapers referred to him as "the Great Manufacturer" (Tharp, 1973, p. 10), Appleton's involvement in the textile industry was neither planned nor at first, desired. It *was* accidental that Appleton happened to be vacationing in Britain at the same time that Francis Lowell was studying textile machinery in English mills, just as it was accidental (or at least very unusual) that Lowell, a tight-lipped man who rarely confided in anyone outside his immediate family, chose to discuss his plan to establish cotton manufacturing in the United States with him. Even when approached by Lowell to invest \$10,000 in the yet-to-be-built Boston Manufacturing Company, Appleton (1858) demurred, offering instead to invest \$5,000 "in order to see the experiment fairly tried... and I should make no complaint under these circumstances, if it proved a total loss" (p. 8).

Appleton is also correct when he states that the accumulation of wealth was not the driving force of his life. In fact, much of his life was devoted to politics. Appleton served six terms in the Massachusetts state legislature and two terms in Congress, earning a reputation as an effective advocate of the Whig agenda (Gregory, 1975).⁵⁶ Throughout his life, he was also intellectually curious and an avid reader of political philosophy, English literature, and American literature (Gregory, 1975).⁵⁷ In addition,

⁵⁶ Appleton took his seat in Congress during the first term of President Andrew Jackson. When he called on the president in 1831, the two men only discussed the weather since they disagreed on virtually everything else. Appleton later wrote, "He had his spitting-box beside him - and the rats were only wanting to make the whole scene conform to caricature" (Tharp, 1973, p. 130). John Tyler was president during Appleton's second term in Congress.

⁵⁷ His daughter, Frances, was married to Henry Wadsworth Longfellow. She died tragically on July 8th, 1861, when her dress caught on fire in her Cambridge home. One of the Longfellows' friends related that Frances, enveloped in flames, ran into the room where her husband sat. He tried unsuccessfully to douse the flames by wrapping his wife in a rug, and was horribly burned in the effort. When his son Ernest saw him, Longfellow held up his hands wrapped in bandages and cried, "I couldn't save her!" The day after his daughter's funeral, Nathan Appleton died (Tharp, 1973, p. 301).

Appleton lived a relatively modest life. Unlike some textile magnates who lorded over mill towns from the opulence of nearby mansions, Appleton lived in an elegant but understated house on Beacon Hill (Tharp, 1973).⁵⁸ He was also imbued with a sense of public responsibility, using his wealth to support schools, libraries, churches, and scientists. According to Gregory (1975), Appleton's annual charitable contributions were estimated at \$37,500, making him one of the most benevolent of the wealthy men residing in antebellum Boston.

However, to attribute Appleton's success purely to accident implies that he was little more than a nineteenth century Forrest Gump, an innocent man caught up in historical events simply because he was in the right place at the right time. Nothing could be further from the truth. While Appleton may have inadvertently stumbled onto the ground floor of the textile industry, he was also an ambitious, astute businessman who made the most of every opportunity. He did not have to accept Lowell's offer to invest in the Boston Manufacturing Company. After all, he was already a wealthy merchant who at the time "intended to retire altogether from business" after "laying up a moderate property, - say two hundred thousand dollars" (Winthrop, 1861, p. 60). Similarly, Appleton could have rested on his laurels after the success of the Boston Manufacturing Company but instead chose to play a major role in the establishment of Lowell, shrewdly calculating the enormous profits to be earned in the textile industry (Dalzell, 1987).⁵⁹

It is also worth noting that Nathan Appleton was very much aware of the

⁵⁸ Kirk Boott, the agent of the Merrimack Manufacturing Company, lived in an elaborate corporation-owned Greek Revival mansion with a façade dominated by a large pediment and four massive Ionic columns (Parker, 1985). Dunwell (1978) describes Boott's "hierarchic arrangement of housing: boardinghouse blocks for the operatives; modest single dwellings for the skilled workers, overseers, and superintendents; and a suitably elegant mansion for himself, set apart from the clustered housing" (p. 38).

⁵⁹ Regarding the founding of Lowell, Weible (1991) accuses Appleton of "callous indifference to the people whose land he and his colleagues bought and developed, essentially to maintain their own wealth and status... the same attitude that would cause the textile industry to abandon the same land a century or so later" (p. 26).

importance of integrity and honor in the conduct of business. In his memoir of Abbott Lawrence, Appleton argued that the merchant “who has been found to equivocate or falter in his course, becomes a marked man. He is avoided.” He acknowledged the obvious: that the object of trade is to earn a profit. However, in the pursuit of profit, “not the slightest prevarication or derivation from truth is allowable... Mercantile honor is as delicate and fragile as that of a woman. It will not bear the slightest stain” (Winthrop, 1861, pp. 59-60). Throughout his life, Appleton conducted himself in accordance with this philosophy. When he died, his friends and business associates praised his “unsullied integrity,” “high tone of honor,” “extreme modesty, amounting almost to bashfulness,” and “extensive knowledge, sound judgment, comprehensive wisdom, and urbane manners” (Winthrop, 1861, pp. 6, 65, 66, 73). He was the last survivor among the group of men who established large-scale manufacturing in New England, a link between the infant industry of the early republic and the mature industry that existed on the eve of the Civil War. Appleton (1858) downplayed his own role in the Industrial Revolution, “claim(ing) for myself no other merit, than a cordial co-operation with Messrs. Lowell, Jackson, Boott, and others the more active parties in establishing the cotton manufacture” (p. v). He was also well aware of Lowell’s “principle of making every possible provision for the moral character and respectability of the operatives” (Appleton, 1858, p. v). However, by the 1840s, declining profits brought on by the rapid expansion of the textile industry made it increasingly difficult for businessmen like Appleton to reconcile their business decisions with Lowell’s original vision of benevolent capitalism.



The family, business, and political ties connecting the Boston Associates were important factors leading to the establishment and success of the Boston Manufacturing Company, the first fully integrated factory in America in which all of the processes

needed to convert cotton into cloth were performed under one roof using waterpowered machinery. In addition to these formal ties, Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton were also linked by similar backgrounds and shared values. They were born in small towns and raised in families proud of their New England heritage. Their careers as merchants began in the heady atmosphere of the early republic, a time when many Americans looked upon private virtue and public responsibility as the hallmarks of good citizenship. In addition, Lowell, Jackson, and Appleton understood the importance of formal and informal education. They constantly sought to acquire knowledge and understanding to satisfy their natural curiosity and improve their business prospects. Absorbing the habits of their region and traditions of their Puritan ancestors, the Associates believed in hard work, thrift, self-improvement, and self-reliance. They were both shrewd businessmen intent on earning profits and virtuous citizens motivated by a sense of public responsibility. Their factory community in Waltham would successfully harmonize these contradictory impulses.

CHAPTER 6: THE ESTABLISHMENT OF THE BOSTON MANUFACTURING COMPANY

In the opening chapter of his magisterial study of Thomas Jefferson's presidency, Henry Adams (1889/1986) described the "marked air of rusticity" (p. 15) that characterized much of the United States at the dawn of the nineteenth century. The new nation was populated by 5,308,483 people, most of who lived in widely scattered settlements along the Atlantic Ocean (Adams, 1889/1986). Horrific roads and treacherous rivers made traveling from state to state, and even from town to town, a daunting task for all but the most intrepid of travelers. Even the Boston Post Road, the main thoroughfare in New England and future lifeline of the Boston Manufacturing Company, was, according to Adams, merely a "tolerable highway" (p. 11). Just fifty to one hundred miles inland, more than half the dwellings in the United States were simple log cabins which often lacked basic amenities such as glass windows. Adams claimed that the living standard of the yeoman farmers who comprised the bulk of the nation's population was not much different than that endured by their ancestors centuries earlier. Even in New England, which Adams believed to be the most advanced region of the United States, "the ordinary farmhouse was hardly so well built, so spacious, or so warm as that of a well-to-do contemporary of Charlemagne" (p. 15). In 1800 the nation was a "thousand miles of desolate and dreary forest, broken here and there by settlements," a land where "the eighteenth century ruled supreme" (pp. 107, 14).

In many ways, Thomas Jefferson, the first president elected in the nineteenth century, embodied the values of eighteenth century America. Accusing the Federalists of attempting to foist a monarchy on the American people, Jefferson advocated a return to what he viewed as the simple republican virtues of 1776. He believed that agrarianism was uniquely compatible with republicanism, and the virtue of small farmers widely

diffused throughout the nation was preferable to the corruption and vice found among the downtrodden citizens residing in the teeming cities of Europe (Bender, 1975). Jefferson exalted farmers as the backbone of the American republic while condemning the “mobs of great cities (that) add just so much to the support of pure government, as sores do to the strength of the human body” (Jefferson, 1787/1954, p. 165).⁶⁰ Believing the consolidation of federal power to be inimical to the principles of republicanism, Jefferson pledged in his first inaugural address to institute

a wise and frugal government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned.
(Ford, 1905, p. 197)

Although Jefferson held liberal views on religion and the rights of man, his ideas on government and the economy were firmly rooted in the past. To his admirers, he was America’s Horatio at the Bridge, defending the republic from Old World corruption whether it appeared in the guise of European monarchy, large-scale industrialization, or urbanization.

However, by an ironic twist of fate, the policies of Thomas Jefferson and his successor James Madison set in motion the chain of events that brought England’s Industrial Revolution to the American Eden. Responding to the seizure of American ships by England and France during the Napoleonic Wars, Jefferson pushed through Congress

⁶⁰ Bender (1975) points out that all of the Founding Fathers, to varying degrees, believed that agriculture would remain the linchpin of the American economy. Even Alexander Hamilton, the high priest of finance and commerce, foresaw the important role farmers would play in ensuring the success of the American republic, stating that agriculture “has *intrinsically a strong claim to pre-eminence over every other kind of industry*” (Hamilton quoted in Syrett, 1966, p. 236).

the Embargo Act of 1807, thereby stopping the export of all goods from the United States. The impact of the embargo on New England's economy was devastating. Docked ships lined the wharves of once busy ports, crippling the region's maritime commerce and "spreading bankruptcy through every village" (Adams, 1889/1986, p. 1119). Even James Sullivan, the Republican governor of Massachusetts, was alarmed, warning the President that "the people of this State must soon be reduced to suffering and poverty" (p. 1103). Although the Embargo Act was repealed after fifteen months, the Non-Intercourse Act, which resumed trade with all nations except England and France, and the subsequent War of 1812, continued to wreak havoc on New England's maritime-based economy. The disruption in trade led enterprising New England merchants such as Francis Cabot Lowell, Patrick Tracy Jackson, and Nathan Appleton to seek new business ventures to increase their wealth. Their decision to move into manufacturing not only solidified their social and economic standing; it also fundamentally transformed virtually every aspect of life in their beloved New England so that by 1860, "cotton was indeed king, not only in the fields of the south but in the homes and workshops of the north as well" (Ware, 1931, p. 118).

This chapter will investigate the origins of the Boston Manufacturing Company, focusing on the significance of Francis Cabot Lowell's trip to England in 1810 and the chain of events leading to the incorporation of the Boston Company in 1813. The company's early history and the decision of the Boston Associates to institute a policy of corporate paternalism at their Waltham factory will also be examined.

Francis Lowell's Trip to England

On July 25, 1810, Francis and Hannah Lowell and their four children, arrived in Liverpool for an extended stay in the British Isles. The reasons for the trip, according to a letter written by Francis's sister, Anna, were "the health of Mrs. Lowell which has been

for some time delicate, the hope of giving to their children some advantages of education superior to those in our own country, and the pleasure and improvement they anticipate from seeing other countries.” Referring to her brother and his wife as “sober, rational people,” Anna added somewhat cryptically, “they seek for themselves useful information” (*Proceedings*, MHS, 1903/1904, p. 303).

The reasons given by Anna Lowell for her brother’s vacation were most likely accurate. Certainly it was not unusual in the early years of the nineteenth century for a wealthy New England merchant to visit Europe. In fact, Francis’s brothers, John and Charles, had previously spent a considerable amount of time and money sightseeing in England and France (Rosenberg, 2011). Also, Francis Lowell’s boys - Francis, Edward, and John - attended school in Edinburgh, while daughter Susan was tutored by her mother (Rosenberg, 2011). In addition, there is no question that Francis and Hannah Lowell hoped to restore their health while in England. In a letter to brother-in-law Patrick Jackson, Lowell seemed hopeful that his wife’s condition was improving: “Hannah is better than she was in America or than when we first came to this country. Her strength is much greater and we walk frequently almost daily from four to six miles” (FCL papers, folder 6.9, Nov. 2, 1810). The Lowells also took time to visit Cheltenham and Great Malvern, towns famous for their medicinal springs. Unfortunately, the improvement in his wife’s health proved to be temporary. Shortly before returning to America, Lowell wrote, “Hannah is as thin or thinner than when we left America, otherwise in about the same state of health” (FCL papers, folder 7.1, Feb. 6, 1812).

Some historians have speculated that the real reason for Lowell’s trip abroad was to investigate England’s robust textile industry. The biographer of the Lowell family, Ferris Greenslet (1946), asserts that Lowell was “approaching a breakdown” and his wife was “in nearly as bad a case” (p. 125), yet even in these dire straits, he traveled abroad in order to study textile manufacturing. Dalzell (1987) also concedes that the Lowells travelled to

England seeking to improve their health, but claims “there remained, always, that other purpose, known only to a few close friends” (p. 5). Gibb (1950) agrees, arguing that it is “scarcely conceivable” that someone as perceptive as Lowell would have been unaware of the opportunities available in manufacturing. “To believe this is to deprive Lowell of credit for the exquisite timing of the English visit, and to label as an innocuous pleasure journey what may well have been a brilliant and dangerous business gamble” (p. 8).

There is considerable circumstantial evidence that the real reason for Lowell’s vacation was to uncover the secrets of England’s textile industry for the purpose of opening his own factory in the United States. Would a man as cautious and methodical as Francis Cabot Lowell embark on a risky career in midlife without carefully planning every step along the way, from travelling to England under the guise of a family vacation to opening his factory in Waltham several years later? Would it not make sense for a savvy businessman like Lowell to pursue other opportunities in response to the Embargo Act of 1807 and the Non-Intercourse Act of 1809? Also, Lowell had been exposed to textile manufacturing at an early age. Twenty-five years earlier, his uncles, the Cabot brothers, opened the first textile mill in the United States in Beverly, Massachusetts (Ware, 1931). Lowell was at the very least aware of his uncles’ foray into manufacturing, and most likely visited the mill as a young boy. These factors seem to indicate that Lowell travelled to England as part of a master plan to bring the Industrial Revolution to the United States.

However, history is seldom as neat and tidy as the human mind would like it to be. As Mailloux (1957) points out, there is simply no evidence that Lowell travelled abroad in order to investigate textile manufacturing. In fact, Lowell wrote on October 12, 1811, “I do not find that our stay here is of any service for the purposes for which I came. And it is a great expense” (FCL papers, MHS, folder 6.16). Also, Lowell was anxious to leave England and spend time touring France. In a letter to Patrick Jackson, Lowell wrote, “I

go to France on Monday next and shall not hear from you for a long time” (FCL papers, MHS, folder 6.17, Nov. 5, 1811). Would Lowell have visited France “for a long time” had the purpose of his European vacation been to study textile manufacturing in England?⁶¹

While historians speculate on Lowell’s motives in travelling to England, there is no doubt that once there, he toured textile mills with the intention of obtaining information that would allow him to open his own factory in the United States. Many years later, Nathan Appleton (1858) recalled that in 1811, he had

frequent conversations on the subject of the Cotton Manufacture, and he informed me that he had determined, before his return to America, to visit Manchester, for the purpose of obtaining all possible information on the subject, with a view to the introduction of the improved manufacture in the United States. (p. 7)⁶²

To avoid violating laws designed to preserve England’s textile monopoly, Lowell did not write about the cotton mills he visited or the technology he observed. His only reference to his factory visits was, “William Smith was very good showing us the town manufactories” (FCL papers, MHS, folder 6.13, May 1811).⁶³

Providing Francis Lowell with access to their textile mills was a serious (though

⁶¹ Lowell was unable to convince English authorities to allow him to visit continental Europe. He requested permission to travel to France, with no restrictions on his returning to England. Ironically, in a letter to British authorities, Lowell insisted, “I am not a dangerous man” (FCL papers, MHS, folder 6.17, Nov., 1811).

⁶² Mailloux (1957) points out that “Appleton is mistaken about the time of his interviews with Lowell, for Lowell was in Bristol until February 6, 1812. Appleton and Lowell probably met in Edinburgh some time [*sic*] in late February, 1812” (pp. 42-43).

⁶³ Lowell’s enthusiastic reaction to manufacturing is evident in a letter he wrote after visiting a nail factory in Scotland: “Eighty men are employed in making nails only. They have several furnaces for the manufacture of steel of various kinds. They make an immense number of shovels, axel-trees and cast iron of various kinds. It is astonishing to see large bars of iron roll out easier than you would paste, and cut up as wished, as easily as scissors can cut paper” (Josephson, 1949, p. 18). Josephson does not provide a citation for this passage. I have not been able to locate the original copy of this letter.

understandable) blunder on the part of English factory owners. Little did they realize that by opening their doors to the Boston merchant with whom they had previously done business, they were allowing a Trojan horse into their midst, a man determined to pirate their most prized industrial technology, including the power loom. Lowell's reserved, unassuming manner concealed a precise mind and a flair for mathematics, qualities that would prove indispensable in his daring act of industrial espionage. His business associates marveled at his ability to solve even the most complex mathematical problems. Nathan Appleton noted that Lowell, after returning to America, "made numerous mathematical calculations necessary to perform these complicated movements, which occupied him constantly for more than a week" (Winthrop, 1861, p. 20). Lowell's nephew, John A. Lowell (1848), observed that the motions of the double speeder machine "were very complicated, and required nice mathematical equations. Without them, Mr. Moody's ingenuity, great as it would have been at fault. These were supplied by Mr. Lowell" (p. 7). Even the gifted mathematician and navigator Nathaniel Bowditch was impressed with Lowell's mathematical skills, stating that the calculations used in a Lowell-designed machine were so advanced "that he had not supposed any man in America familiar with but himself" (p. 7).

Although there is no evidence that Lowell spent countless hours in English mills observing textile machinery and asking questions, some historians have claimed otherwise (Gibb, 1950; Greenslet, 1946; Gregory, 1975; Josephson, 1949). Such unsubstantiated claims are most likely baseless. The vision of Francis Cabot Lowell travelling from mill to mill, committing the workings of complex textile machinery to memory, is an alluring one. However, it is hard to believe that any factory owner would have been so indulgent of Lowell's interest in textile machinery to allow him to stand for hours "completely absorbed before the machines in the cotton mills, and asking a thousand questions of owners and operatives" (Greenslet, 1946, p. 128). More likely,

Lowell gained access to the mills by posing as a “curious merchant,” and then used his mathematical ability to gain a general understanding of the textile machinery (Dunwell, 1978, p. 30). Once back in America, Lowell, with the help of Patrick Jackson and Paul Moody, was able to develop his own version of the machinery he had observed.⁶⁴

Lowell was undoubtedly impressed with the advanced state of England’s textile machinery. At the same time, he was disgusted with the quality of life that seemed to follow in the wake of industrialization.⁶⁵ In a letter to his uncle, William Cabot, Lowell criticized “the great corruption of the highest and lowest classes, and the great number of beggars and thieves” (FCL papers, MHS, folder 7.1, Jan. 2, 1811). Several months later, Lowell again wrote his uncle, stating, “We found the manufacturing towns very dirty, the people very much disposed to be jealous of strangers, particularly Americans” (FCL papers, MHS, folder 6.13, May 29, 1811). On another occasion, Lowell expressed Scrooge-like thoughts to explain the reasons for poverty in England. He complained to his sister-in-law, Mary Lee, that public charities were to blame for “all this distress and poverty in a country so full of riches,” and that “every person of the laboring class who prefers idleness to labor begins discreetly to calculate what their chance of getting a part of this fund for their support,” and then waits for the opportunity to go on the dole. Despite his harsh view of public charities, Lowell praised private charities, noting that the Bible was “full of injunctions to private charity” (FCL papers, MHS, folder 6.12, April 6, 1811).⁶⁶

The city which most impressed Lowell was Edinburgh, Scotland: “Of all the

⁶⁴ Lowell’s invention improved on the design of English power looms. He explained that “the principal difference between our looms and those in England are that ours are not a crank but the motion of the (unintelligible) resembles that given by a hand weaver” (FCL papers, MHS, folder 8.11, April 20, 1816). Appleton (1858) also noted that Lowell’s power loom “was different in several particulars from the English loom” (p. 9).

⁶⁵ Appleton was also critical of the impact of industrialization on English society (see p. 90).

⁶⁶ To prove his point that public charity caused poverty, Lowell claimed that “the beggars of any particular description increase on the foundation of a charity for their relief. The number of blind in the street, is four fold what it was before the institution of the blind asylum” (FCL papers, MHS, folder 6.12, April 6, 1811).

places we have been in we admire Edinburgh the most. The people are as attentive as the French and have as good morals as the English” (FCL papers, MHS, folder 6.13, May 29, 1811). Lowell’s admiration of Edinburgh is interesting in that it was in an area where mill owners were experimenting with paternalism in order to negate the harsher aspects of industrialization found in cities such as Manchester and Liverpool. Dalzell (1987) describes in some detail the vast economic and social changes taking place in Scotland at the time of Lowell’s visit, and suggests that the paternalistic system instituted at the Boston Manufacturing Company may have been inspired by the planned industrial villages (including Ormiston, Athelstaneford, and New Lanark) that existed in Scotland at the time. However, Lowell never revealed the source of his inspiration for the Boston Manufacturing Company, leaving historians to complete the historical puzzle.

The Founding of the Boston Manufacturing Company

Just prior to the outbreak of the War of 1812, Francis Lowell and his family departed Liverpool for the United States. On the return journey, a British frigate seized the ship on which the Lowells were traveling and brought it to Halifax, Nova Scotia. Twice, British authorities searched Lowell’s luggage but found nothing. He had outsmarted his captors. Realizing it was against the law to smuggle plans for textile machinery out of England, Lowell stored the information in his mind, confident that his prodigious memory and aptitude in mathematics would allow him to replicate what he had observed in the English factories (Greenslet, 1946).

Safely back in Boston, Lowell began implementing his plan to establish large-scale textile manufacturing in New England. However, before constructing his factory, he had to solve three critical problems: How should his company be structured? Could he successfully replicate the machinery he had observed in England? And most importantly, who would work in his mill, and how could he avoid re-creating the squalid conditions he

had seen in English factory towns?

Corporate Structure

In the thirty years prior to the incorporation of the Boston Manufacturing Company, numerous small textile mills were constructed along New England's streams and rivers. The first of these mills, the Beverly Cotton Manufacturing Company, was incorporated by the Massachusetts legislature in 1786 at the request of Francis Lowell's uncles, John, Andrew, and George Cabot (Gibb, 1950; Handlin & Handlin, 1969; Rosenberg, 2011). Due to the risky nature of the project, the state legislature awarded £500 to the Cabot brothers and their partners, which they combined with their own investment of \$14,000 to construct a mill and purchase machinery to spin cotton into thread. Two horses walking in circles in the factory basement provided power for the spinning machines. In the heady days of the early republic, the small manufactory offered hope that the United States could eventually attain economic independence from Europe. Even President George Washington seemed enthused about the company's prospects. After touring the factory, Washington (1789/1860) wrote in his diary that "the whole seemed perfect, and the Cotton stuffs, w^hch they turn out, excellent of their kind" (p. 41).

For the Cabots and their partners, it did not take long for the initial flush of optimism to give way to the grim realities of business. The Beverly Company faced a host of problems including a lack of capital and power, poorly designed machinery, unskilled workers, and foreign competition. In 1798, the last of the original owners sold the business for \$2,630.29, and by 1807, the company had closed (Rosenberg, 2011). However, the failure of the company did not deter other would-be manufacturers from entering the textile business. In 1810, the United States Bureau of the Census reported that there were fifty-four textile mills in Massachusetts manufacturing an aggregate total of 36,000 yards of cotton cloth (Coxe, 1814). Like the Beverly Cotton Manufacturing Company, these mills

were small, poorly capitalized establishments that used powered machinery to spin cotton into yarn. The yarn was then woven into cloth using hand looms.

Shrewd and astute as always, Francis Lowell had no intention of repeating the mistakes made by earlier textile manufacturers. He brushed aside warnings from relatives and began planning an entirely new type of factory that would perform all of the steps necessary to turn raw cotton into finished cloth under one roof using waterpowered machinery. Instead of following one of the traditional business models used at the time (such as a partnership or an individual proprietorship), Lowell and his partners - brothers-in-law Patrick Jackson and Benjamin Gorham, and business associate Uriah Cotting - petitioned the state legislature to incorporate a joint stock corporation that would allow investors to purchase shares in the company.⁶⁷ On February 23, 1813, the Massachusetts state legislature passed an act to incorporate the Boston Manufacturing Company, “for the purpose of manufacturing Cotton, Woolen and Linen goods, at Boston, in the County of Suffolk, or within fifteen miles thereof” (BMC MSS, vol. 1, p. 3). The act further authorized the corporation to issue up to \$400,000 in stock, thereby providing the firm with the substantial capital reserves that were lacking in other textile companies.

Lowell estimated that he would initially need \$100,000 to build and equip his factory, and if it proved successful, “it is proper to increase the capital stock to the limits permitted by the act of incorporation and as much farther as the Company may see fit, if the Legislature will grant permission therefore” (BMC MSS, vol. 1, p. 7). One hundred shares of stock in the Boston Company were issued, each share requiring an investment of \$1000. Lowell subscribed to 15 shares. Of the remaining investors, five were Lowell’s brothers-in-law (Patrick Tracy Jackson, 20 shares; Charles Jackson, 10 shares; James Jackson, five shares; Benjamin Gorham, three shares; and Warren Dutton, two shares)

⁶⁷ According to Dalzell (1987), the only other major textile corporation operating on a joint stock basis was Robert Owen’s factory in New Lanark, Scotland.

and six were friends and business associates (John Gore, 10 shares; Israel Thorndike, 10 shares; Israel Thorndike Jr., 10 shares, Uriah Cotting, five shares; James Lloyd, five shares; and Nathan Appleton, five shares). Additional subscriptions of stock would be issued “at the expiration of two years, or sooner if the majority of the Company shall so decide “ (BMC MSS, vol. 1, pp. 8-9).

On October 18, 1813, the proprietors of the Boston Manufacturing Company met at Uriah Cotting’s counting room at 72 Broad Street in Boston “for the purpose of organizing said company, chusing [*sic*] officers, & doing any other business, which they are authorized to do by their Act of Incorporation” (BMC MSS, vol. 1, p. 10). The proprietors chose Patrick Jackson as clerk and treasurer, giving him control over the day-to-day operation of the company. They voted that

There shall be a Treasurer, who shall receive and pay all monies, collect all debts and assessments, and have the general care, of the pecuniary concerns, of the corporation, and shall do all other acts required by law. He shall give bond in the sum of ten thousand dollars, with two or more securities for the faithful performance of his duty. The Treasurer shall be also the factory agent of the Company to make purchases and sales of stock, to superintend and regulate the concerns of the Company, and make contracts relating thereto. He may contract debts in the name of the Company, when duly authorized thereto by the directors. He shall render true statements of the affairs of the Company to the directors when requested. (BMC MSS, vol. 1, p. 11)

Francis Lowell, Nathan Appleton, James Lloyd, Israel Thorndike Jr., and Patrick Jackson

were selected to serve on the board of directors.⁶⁸

Of course there was no guarantee that Francis Lowell's corporation would succeed where others had previously failed. Brother-in-law Henry Lee noted that even some of those who were well acquainted with Lowell's ability doubted the wisdom of his plan and "used all their influence to dissuade him from the pursuit of what they deemed a visionary and dangerous scheme." These close acquaintances knew "the full strength of his mind, the accuracy of his calculations, his industry, patience, and perseverance... they still thought him *mad*" (Miles, 1846/1972, p. 222). Even Nathan Appleton hedged his bets. When Lowell approached him in England, Appleton "promised him my cooperation." However, when Lowell and Patrick Jackson met with him in Boston and asked him to purchase 10 shares of stock, he demurred:

They proposed to me that I should take ten thousand of this subscription. I told them theoretically I thought the business ought to succeed, but all which I had seen of its practical operation was unfavorable; I, however, was willing to take five thousand dollars of stock, in order to see the experiment fairly tried, as I knew it would be under the management of Mr. Jackson; and I should make no complaint under these circumstances, if it proved a total loss. (Appleton, 1858, pp. 7-8)

Most likely Appleton's faith in Jackson's ability was shared by the other investors in the Boston Company. As Gibb (1950) states, these men were optimistic about the company's prospects due to the favorable outlook for the textile industry during the

⁶⁸ In addition to deciding such weighty issues as who would serve as treasurer of the company and who would serve on the board of directors, the proprietors voted that "There shall be a seal of the Corporation to be provided and kept by the Treasurer, with the legend, 'Boston Manufacturing Company,' either abbreviated or at large, and in the center shall be, such device as the directors shall order" (BMC MSS, vol. 1, p. 12). The "device" eventually pictured in the center of the company seal was the power loom.

War of 1812. They were also gambling that Lowell would be successful in his efforts to build a working power loom based on the machinery he had observed in England. Most importantly, the investors believed in the “personal integrity and managerial ability of Lowell and P. T. Jackson” (Gibb, 1950, p. 9). Both men were completely absorbed in the new undertaking, with Jackson promising to devote “his whole time and attention to the concerns of the Boston Manufacturing Company” at a salary of \$3000 per year (BMC MSS, vol. 2, p. 20).⁶⁹ Jackson’s sister, Mary Lee, was “depressed” to see her brother so engrossed in organizing the new company, even to the detriment of his immediate family. She hoped that the

manufactory in which he is engaged may prove lucrative - they have now completed their Company and are beginning to think of fixing upon a stream and commencing their establishment, and I found, much to my surprise, they really intended to live at the place - certainly Pat and perhaps Mr. Lowell. I had no idea that it was a thing that would decide their future destination. (Morse, 1926, pp. 197-198)

Constructing the Machinery

When visiting English mills in the spring of 1812, Francis Lowell was particularly interested in the power loom, the most technologically advanced machine of its time, and for American manufacturers, the Holy Grail of textile machinery. While the power loom enabled English manufacturers to mass produce cloth and dominate the world market, American textile manufacturers depended on hand looms to weave thread into cloth. For example, in Webster, Massachusetts, Samuel Slater employed more than 500 part-time

⁶⁹ Due to the success of the Boston Manufacturing Company, the board of directors voted to raise Jackson’s salary to \$5000 per year effective January 1, 1819 (BMC MSS, vol. 2, p. 38).

hand loom weavers who were given detailed instructions on weaving and penalized for any mistakes they made (Tucker, 1984). In Massachusetts, the Waltham Cotton and Wool Factory had fourteen hand looms in operation, “though a considerable portion of the weaving is done in the neighbouring [*sic*] and some of the distant towns” (Ripley, 1815, pp. 263-264). Such small Rhode Island system mills soon found themselves locked in a struggle for survival with Francis Lowell’s “mammoth Waltham establishment,” whose success was predicated on the use of the power loom (*Manufacturers’ and Farmers’ Journal*, October 30, 1820, p. 2).

After Lowell “obtained all the information which was practicable about it” in England, he returned to the United States and determined to reconstruct the English loom from memory. He spent months experimenting in a Boston store, hiring a man to turn a crank while he tested his mathematical equations (Appleton, 1858). Lowell was so encouraged with the results of his experiments that in the “Articles of Agreement” of the Boston Manufacturing Company, he and his partners boldly promised to “make weaving at first, the principal object of attention.” They believed that weaving could be “performed wholly by water, at a much less expense than in the usual manner, and that a very considerable number of looms might be employed in weaving cloth for other factories” (BMC MSS, vol. 1, p. 7).

After proving to his own satisfaction that the design of his loom was practical, Lowell needed a mechanic to construct a working power loom based on his calculations. His first choice, Jacob Perkins of Amesbury, declined his offer, suggesting instead Paul Moody, a man who had once worked for him and had extensive experience in the textile industry (Gibb, 1950). On October 12, 1813, Lowell wrote to Moody, informing him that “We have advertised for machine makers to apply by the 1st of November. We shall wish you to come up here at that time.” Lowell also informed Moody that he was not yet finished mining the technological secrets of England’s textile industry. In a confident,

matter-of-fact manner, Lowell wrote that he was sending an unidentified man to England “to get any information we wish. Will you write me word, whether you wish any information, of any kind about the construction of any of the machinery, or the manner in which any part of the process is performed” (FCL papers, MHS, letter book, vol. 4).

On October 13, 1813, the Boston Manufacturing Company made the critical decision to hire Paul Moody as “a superintendent of the works of the company, and as an agent thereof, at the rate of Fifteen hundred dollars per annum” (BMC records, vol. 2, p. 1). In hiring Moody, the directors had crossed the Rubicon, entrusting the future success of their company (and a considerable portion of their fortunes) to a thirty-four year old Amesbury machinist who had little in common with their own privileged lives. Francis Lowell’s vision, wealth, personal connections, business acumen, and mathematical genius had brought the American Industrial Revolution to the threshold of success. Success or failure now rested in the capable hands of Paul Moody.

The company’s faith in Moody was not misplaced. The basement of the four story mill under construction in Waltham was converted into a machine shop and outfitted with a blacksmith shop and assorted tools at a cost of \$1535.84 (BMC MSS, vol. 2, p. 9). On January 30, 1814, Patrick Jackson reported to Lowell that “I have got our Loom up and yesterday wove several yards by water - The Loom is excellent tho’ still susceptible of improvement... Moody begins to be quite assured of its success” (FCL papers, MHS, folder 7.14). By autumn, Lowell had enough faith in the new power loom to invite Nathan Appleton to see it in operation. Appleton (1858) was mesmerized by the sight, later writing, “I well recollect the state of admiration and satisfaction with which we sat by the hour, watching the beautiful movement of this new and wonderful machine, destined as it evidently was, to change the character of all textile industry” (p. 9).

With the successful construction of the power loom, the Boston Manufacturing Company became the first factory in America in which all of the processes for the mass

production of cloth were accomplished under one roof using waterpowered machinery (Bender, 1975; Gibb, 1950; Josephson, 1949). Just two years after opening its mill, the Boston Company constructed a second, larger mill adjacent to the first. Production soared, and so did profits. Dividends averaged 19.25 percent per year between 1817-1821, and reached 27.5 percent in 1822 (Dalzell, 1987). Meanwhile, other New England textile mills found themselves unable to compete with English manufacturers when trade was resumed after the War of 1812. During a trip to Rhode Island in June of 1816, Lowell and Appleton found that “all was dead and still... We saw several manufacturers; they were all sad and despairing” (Appleton, 1858, p. 13). Lowell assured these mill owners that the answer to their problems was the power loom, which the Boston Manufacturing Company was selling (along with other Waltham machinery) at a hefty premium (Gibb, 1950). However, these mill owners were suspicious of Lowell’s claims and slow to adopt the new technology developed in the Waltham machine shop.⁷⁰

At first glance, Francis Lowell’s willingness to sell power looms and other textile machinery to rival companies seems inexplicable. Why would he share with others the technology that he had gone to such great lengths to develop? Undoubtedly, Lowell was motivated in part by a desire to keep his machine shop in Waltham operating at full capacity and also to earn additional revenue for the Boston Manufacturing Company (Gibb, 1950).⁷¹ It is also quite possible that Lowell was motivated by a patriotic desire to help the United States achieve industrial self-sufficiency. In a revealing letter to Pennsylvania textile manufacturer Thomas Gilpin, who had expressed interest in purchasing Waltham-built power looms, Lowell sounded very much the shrewd businessman when he wrote that his company had “incurred great expenses”

⁷⁰ The Rhode Island-based *Manufacturers’ and Farmers’ Journal* argued that the “monstrous dividends” paid by the Waltham company proved that a high protective tariff was unnecessary (Dec. 25, 1820).

⁷¹ In the first seven months of 1817, the Boston Manufacturing Company earned a profit of \$2,030 on the sale of machinery. The profit margin on individual machines ranged from 20 to 50 percent (Gibb, 1950).

in developing the power loom, and therefore expected “a suitable compensation for the risqués [*sic*] we have run.” However, Lowell also stated to Gilpin, “We consider ourselves not the rivals of manufacturers in this country but to foreigners” (FCL papers, MHS, folder 8.11, April 20, 1816). Lowell was most definitely sincere in his expression of patriotism to Gilpin. He was certainly not in the habit of cloaking his business transactions in the American flag, and also had nothing to gain by such a reference in a private business letter. Lowell’s letter to Gilpin reveals a harmonious integration in his personality that historians have been loath to recognize: he was a talented businessman who drove a hard bargain and at the same time a patriot who sought what was best for his country.

Meanwhile, just one mile downstream from the Boston Manufacturing Company, the Waltham Cotton and Wool Company quietly awaited its fate. In 1815, the factory was an “extensive and profitable establishment” (Ripley, 1815, p. 263) employing 200 workers to spin 360 pounds of cotton and wool per day. Prosperity, however, was fleeting, and one year later, the company teetered on the verge of bankruptcy. In a letter to Francis Lowell, Patrick Jackson reported that one of the Cotton and Wool Company’s owners had incurred enough debt “to ruin all the proprietors,” a development that would work in favor of the Boston Company (FCL papers, MHS, folder 8.10, Feb. 14, 1816). Jackson knew enough of business to recognize that the Cotton and Wool Company was at death’s door and counseled patience in dealing with the firm’s proprietors. In November 1817, the Cotton and Wool Company offered to sell “all the real estate belonging to their company” for \$25,000, a proposal rejected by the Boston Manufacturing Company, which graciously thanked the proprietors for “their civility in giving to us the first offer” (BMC MSS, vol. 2, p. 36). The following year, a real estate listing for the Cotton and Wool Factory referred to the firm as a “valuable manufacturing establishment,” and touted its “valuable water privilege, separate buildings to carry on the Manufacture of Cotton and Woolen Goods,

with commodious Stores and Dwelling houses to accommodate 200 persons” (*Columbian Centinel*, Dec. 9, 1818, p. 4). The end came in 1819, when Jackson announced that the Cotton and Wool Company had agreed to sell its

mill dam and mills on the Charles River with all the real estate owned by said company in Waltham and Newton, and that he (P.T. Jackson) has agreed to pay for the same together with sundry tools and other articles, the sum of sixteen thousand dollars. (BMC MSS, vol. 2, p. 46)

The death of the Cotton and Wool Company demonstrated the superiority of Francis Lowell’s new business model based on mass production, vast capitalization, and advanced technology. As Appleton (1858) stated, the power loom was “destined...to change the character of all textile industry” (p. 9). The Boston Manufacturing Company soon demolished the Cotton and Wool factory and built on the site a large modern brick mill which was used as a bleachery and dye works.

Corporate Paternalism in Waltham

When Francis Lowell met with Nathan Appleton in England in 1811, the two men discussed the potentially negative impact of industrialization on the population of New England. Both Lowell and Appleton were horrified by the wretched workers they observed toiling in English mills and wondered “whether this degradation was the result of the peculiar occupation, or of other and distinct causes” (Appleton, 1858, p. 15). They determined that there was no reason why “this peculiar description of labor should vary in its effects upon character from all other occupation [*sic*]” (p. 15). Even so, Lowell and Appleton were still faced with the problem of securing a reliable work force in a

nation with a chronic shortage of labor. They would have to overcome the long-standing prejudice among Americans against factory work and find a way to compete with the siren song of cheap land pulling people westward (Marx, 1964; Ware, 1931). Many “Rhode Island system” spinning factories (including the Waltham Cotton and Wool Company) solved the labor problem by employing families with many children to work in their mills. Lowell and his partners, however, decided to pursue a different course. They would hire the “well educated and virtuous” (Appleton, 1858, p. 15) daughters of New England farmers, an untapped source of labor whose intelligence and dexterity made them ideally suited to operate power looms and other complex textile machinery.

To entice young women to exchange the familiarity of the family farm for the regimentation of a stranger’s mill and to fulfill his own vision of a well ordered industrial community, Lowell instituted a system of corporate paternalism in Waltham. Appleton (1858) was only partially correct when he claimed that Lowell’s paternalism grew out of a desire to make “every possible provision for the moral character and respectability of the operatives” (p. v). Lowell also had to convince New England families that their daughters would be physically and morally safe in his factory town. To accommodate the “mill girls,” company boarding houses were constructed in the area around the mill and put under the supervision of local matrons of strong moral character. The company also made “every provision for religious worship” (Appleton, 1858, pp. 15-16; Mailloux, 1957), and only female employees of the company were allowed in the houses. The Boston Associates’ efforts to attract young women to seek employment in their Waltham mill were so successful that in 1820, the company often had 40 workers on its list waiting to be hired (Ware, 1931).

On November 6, 1815, the board of directors authorized P.T. Jackson to erect “one Block of two Houses similar to those already built for workmen, and eight smaller Houses provided it can be done cheap, in his opinion, as usual” (BMC MSS, vol. 2, p.

18). This cluster of company housing, known as the Long Block, was situated on the south end of what is now the Waltham Common just one hundred yards from the main entrance of the Boston Manufacturing Company. The total cost to construct the Long Block was \$7423.13, plus \$70 for the digging of a well (BMC MSS, vol. 10, Aug. 31, 1818, p. 164; vol. 13, Sept. 3, 1816, p. 41). The Long Block was comprised of twelve tenements, around which residents cultivated flowers, vegetables, and fruit trees. A massive oak tree and a walnut tree, from which children gathered nuts “to make a feast for winter evenings” (Armstrong & Milton, 1926, p. 24), completed the pastoral landscape located in the shadow of the corporation’s mill. Other boarding houses were constructed along the streets adjacent to the factory.⁷²

The mill girls employed by the Boston Manufacturing Company were an important feature of the Waltham system. Unlike their European counterparts, the mill girls in Waltham were never meant to be a permanent workforce (Appleton, 1858). Rather, the young women worked in the mills for a couple of years and then returned home with a tidy sum of cash. Due to the waterpowered machinery, working in the textile mills was not as strenuous as it was tedious.⁷³ According to Lowell, a mill girl worked six days a week, eleven hours a day (excluding meal breaks), and attended to two looms “after she has learnt the business which generally takes about a month” (FCL papers, MHS, folder 8.11, April 20, 1816). For their efforts, mill girls earned, on average, about two dollars to three dollars and fifty cents a week (Abbott, 1910). A local newspaper, *The Waltham Mirror*, praised the mill girls for their thrift, crediting them with saving “thousands of dollars which are annually deposited for safe keeping in our banking institutions, - Such

⁷² By the late nineteenth century, the Long Block, reflecting its advanced years and the fading glory of its parent company, had fallen on hard times and become “an eye sore to the people” of the town (Armstrong & Milton, 1926, p. 14).

⁷³ Of course, mill work could also be dangerous. Twenty-three year old Charles Brackett was killed instantly when he was “caught in a belt in one of the Waltham factories and carried over a drum making 106 revolutions in a minute” (*New Hampshire Sentinel*, October 14, 1846, p. 3).

economy is praiseworthy” (August 3, 1848, pp. 1-2). *The Mirror* also noted the mill girls’ commitment to reading and education, “which show that they have improved some of the precious hours of life in mental culture. [The] odium which formerly attached to factory life, has been entirely neutralized by the intelligent and high-minded girls who have engaged in this type of employment” (Dec. 14, 1848, pp. 1-2).

Within a few years, a vibrant mill village arose in the vicinity of the Boston Manufacturing Company. Private business owners catering to the needs of mill operatives hung out their shingles, while the Boston Company lavished paternal care on the village it had brought into existence.⁷⁴ Elm trees were planted along company-constructed roadways and a park was established along the Charles River. A fire engine to protect both mill and community was purchased at a “cost of which will not exceed five hundred dollars” (BMC MSS, vol. 2, Sept. 5, 1816, p. 23). The corporation also generously contributed to local religious institutions⁷⁵ and as if to demonstrate its own commitment to doing good deeds, donated two bales of bleached shirtings and one bale of fine bleached sheetings to the Massachusetts General Hospital (BMC MSS, vol. 1, Oct. 4, 1820, p. 62). Even on a personal level, the company seemed determined to go above and beyond what was expected. When three employees successfully extinguished a fire in the mill, the board of directors authorized the treasurer to “present in the name of the Company, to Misters Charles Cushing, Jesse Danforth and Joseph Emerson, ten dollars each, with the thanks of the Company for their good judgment and exertions in saving their property on that occasion” (BMC MSS, vol. 1, Feb. 2, 1821, p. 63).

The success of the Boston Manufacturing Company attracted the attention of

⁷⁴ When it first opened, the Boston Manufacturing Company built a dry goods and grocery store on the Great Country Road “for the accommodation of persons in their employ.” However, with new businesses opening in the area, a company store was no longer needed. Therefore, early in 1819, the company offered to lease the store to “active and enterprising young men” (*Boston Daily Advertiser*, Jan. 23, 1819, p. 3).

⁷⁵ In 1820, the company constructed “a commodious meeting-house” for those employed “in that extensive and flourishing establishment” (*New Bedford Mercury*, Jan. 26, 1821, p. 3).

prominent Americans from all walks of life. President James Monroe, Henry Clay, John C. Calhoun, even British author Harriet Martineau, all came to Waltham to see firsthand the industrial experiment taking place at the Boston Manufacturing Company. The *Columbian Centinel* reported that Monroe expressed his surprise at the “extent and improvement” of the Waltham factory and felt that “a few such establishments as he saw there would be sufficient to supply the United States with cotton fabricks [sic]” (July 16, 1817).⁷⁶ Henry Clay, whose American System embodied the fervent nationalism of the post-War of 1812 era, praised the Boston Manufacturing Company in a speech delivered in the House of Representatives, saying, “The greatest order, neatness, and apparent comfort, reigned throughout the whole establishment” (Hopkins, 1961, p. 830). Martineau (1837/1966) was particularly impressed with the mill girls, noting that they lived in company boarding houses (“some with piazzas, and green venetian blinds; and all neat and sufficiently spacious”; pp. 247-248) with six or seven other girls and were able to save two to three dollars a week from their earnings. Newspaper editors also joined in the chorus of praise for the Boston Manufacturing Company. The *Niles Register* reported that the Boston Company was “a magnificent and truly national establishment...There is not an objection to the encouragement of manufacturing...that is not put down in an inspection of this establishment,” while *The Salem Gazette* labeled the Waltham factory “*the pride of America*” (Dunwell, 1978, p. 33; Sept. 27, 1822, p. 3).

⁷⁶ Following his tour of the Waltham factory, Monroe stopped at Gore Place to pay his respects to Christopher Gore. After the questionable activities of the Federalists during the War of 1812, many were eager to demonstrate their loyalty to the United States by warmly welcoming the president during his whirlwind unity tour. Gore, however, was bitter and unwilling to join in the new spirit of political harmony. He wrote that the president “rides hard, visits everything, and in so rapid a manner that it is utterly impossible he should burden his mind with any superfluous knowledge. This day... he stopped at my house, ate a strawberry, bowed and shook hands cordially, (and) returned to Boston.” Five years after Monroe’s visit, Gore wrote, “It is curious to observe how everyone praises the present Chief, while no one has any Confidence either in his talents, or his Sincerity” (Pinkney, 1969, p. 141).



The establishment of the Boston Manufacturing Company in 1814 was a milestone in American history. For the first time, all of the processes to convert a raw material (cotton) into a finished product (cloth) were accomplished in one factory using waterpowered machinery. Francis Lowell had done much more than simply build an American version of the English power loom. Rather, he had conceived an entirely new system of manufacturing based on mass production, modern technology, vast capital, and a temporary female work force. Although primarily interested in turning a profit, Lowell and his associates were also patriotic men who recognized the importance of freeing America from its dependence on English manufacturers as long as this could be done without the poverty and vice found in English factory towns. In Waltham, Lowell's plans were put to the test. He developed a system of corporate paternalism to mitigate the worst features of industrialization, employing mill girls and providing them with cash wages, supervised housing, and a degree of independence that did not exist on the family farm. Furthermore, despite their status as out-of-town businessmen, the Boston Associates took an active interest in Waltham, purchasing a fire engine, constructing streets, planting trees, and providing financial support for churches.

An 1822 painting of the Boston Manufacturing Company by Elijah Smith captures on canvas the moment when large-scale industrialization first intruded on the American Eden.⁷⁷ Amidst stone walls, split log fences, and open fields dotted with trees stands the four story brick mill of the Boston Manufacturing Company. Boarding houses peek out from the woods around the mill, and the company-sponsored church is seen in the distance. A horse-drawn wagon loaded with bales of cotton approaches the mill from the east. Two men stand in the foreground looking at the scene, enjoying the same view

⁷⁷ The *Independent Chronicle* praised Smith's work, predicting that with "proper encouragement he may rise to eminence as a Landscape Painter" (Oct. 16, 1822, p. 2). The painting is now in the possession of Gore Place, the summer home of Massachusetts Governor Christopher Gore and his wife Rebecca.

as we see today. One of the men is pointing (with pride?) at the mill with his right hand, while his friend leans against his walking stick. Looming over the village is densely forested Prospect Hill, the highest point in Waltham. Taken as a whole, the painting suggests the consummation of Francis Cabot Lowell's vision: that industrialization need not lead to poverty, that industrialization and Jeffersonian agrarianism could exist in harmony, and that industrialization would not corrupt the values held by most Americans in the early republic. Good Americans that they were, the Boston Associates believed that education would help bring Lowell's dream to fruition. Therefore, it is not surprising that the Associates made their largest and most sustained commitment to the Waltham community in the field of education.

CHAPTER 7: CORPORATE SUPPORT OF EDUCATION: THE WALTHAM EXCEPTION

By 1815, it was clear that the Boston Manufacturing Company was more than just another textile mill (albeit a large one) struggling to gain a foothold in the American market. Rather, the establishment of the company marked the beginning of the American Industrial Revolution. Advertisements for “Patent water-loom Sheetings manufactured at Waltham” regularly appeared in newspapers around the country, while newspaper editors referred to the Boston Manufacturing Company as an “extensive and flourishing” establishment (*Boston Daily Advertiser*, 1816, p. 4; *New Bedford Mercury*, 1821, p. 3). According to Bender (1975), the Boston Manufacturing Company was the first company in the United States, and possibly in the world, in which all of the processes to convert raw cotton into finished cloth were accomplished under one roof using waterpowered machinery. While Francis Lowell is rightly credited with constructing the first American power loom and employing mill girls to tend his machines, his greatest achievement was conceiving and implementing an entirely new system of manufacturing that featured a corporate business structure, advanced technology, mass production, vast capital, and a female work force. In effect, the Boston Manufacturing Company was the nation’s first modern business corporation and the model for even larger textile companies in such places as Lowell, Lawrence, Holyoke, and Manchester, New Hampshire. Samuel Slater may be referred to as the “Father of the Factory System” in America (Kennedy et al., 2006), but Francis Lowell is certainly more deserving of the distinction.

Lowell fully understood the dangers inherent in introducing large-scale manufacturing in the United States, but believed it was possible to separate industrialization from its social costs (Bender, 1975). His charge, according to Dalzell (1987), was to find a way to “combine the benefits of the process with the wholesale

blunting of its more ominous tendencies” (pp. 32-33). Lowell’s solution to the dilemma was to employ the virtuous daughters of New England farmers and provide them with comfortable living quarters in company-owned boarding houses. After a two or three year sojourn in Waltham, the mill girls would return to their families with a tidy sum of cash and their virtue intact, their jobs filled by other young women seeking money and independence.

To further safeguard their manufacturing village from poverty and vice, the Boston Associates appropriated company funds to create a safe, pleasant, and attractive mill community in Waltham. Their willingness to do so, according to Dalzell (1987), shows “just how seriously they took the threat they saw implicit in industrialization and how anxious they were to neutralize it” (p. 34). For the Associates, who came of age in the early days of the republic when the belief in civic virtue was an article of faith among the nation’s citizens, what better way to ensure the success of the American experiment (and entice young women to work in their mill) than to promote and sponsor educational institutions?

Although the manufacturing system established in Waltham became the model for other textile communities, the relationship between Waltham’s newly established mills and the town’s public schools appears to have been unique and to have reflected the rapidly changing era in which new systems of public schooling and social welfare were still fluid and variable from one town to another. Many Americans (including Thomas Jefferson) feared the rise of the new manufacturing sector, anticipating that it would demolish the self-sufficiency of the nation’s yeoman farmers. And while the rise of industrialization may have led, in the long run, to a loss of personal independence, in the short run the Boston Associates piloted a number of different projects that institutionalized support for social services intended to strengthen society, such as education.

In Waltham, the new business elite actively promoted and generously funded public schools not only for the children of factory employees but for local townspeople as well. In the decades prior to the Civil War, the management of the Waltham factory constructed two public school buildings and covered many of their operational costs.⁷⁸ In addition, the company began a public library and funded one of the first lyceums in the United States. Did this corporate funding result in an abrogation of the local self-governance that many Founders prized in the new republic? Not in the case of Waltham. Despite corporate funding, control of these institutions remained in the hands of town residents. In the case of the public schools, town voters approved the school budget and elected a school committee to set curriculum and ensure that state laws were followed. Also, each school district had a “prudential committee” responsible for hiring teachers (with the approval of the school committee) and overseeing day-to-day operations. Waltham thus seems to have enjoyed for several decades a unique combination of corporate funding and democratic control. Finally, Waltham is also unique in the unanimity with which town residents and historians have, for almost two hundred years, praised the Boston Associates for their enlightened treatment of workers and generosity to the town, as exemplified by their interest in promoting education.

This chapter will examine the contributions of the Boston Manufacturing Company to education, focusing on corporate support for public schools, the public library, and adult education in Waltham from 1817 to 1864. What led Waltham to take this distinctive path in the formation of its public school system? Why did Waltham citizens so universally praise the Boston Associates’ motives in regard to education when residents of other towns in which they established textile mills often criticized *many of the very*

⁷⁸ Mailloux (1957) asserts that the Boston Manufacturing Company constructed three schoolhouses, including one “near the lower mills, for \$350” (p. 157). An article in the *Waltham Sentinel* supports Mailloux’s assertion (Feb. 19, 1857, p. 1). However, I was unable to locate this expenditure in company records.

same men for their lack of civic leadership and democratic participation? Finally, what circumstances led the unique arrangements in Waltham to draw to a close after decades of successful private and public collaboration?

The Factory Schoolhouses

In 1814, the year that the Boston Manufacturing Company commenced operations, life went on much as it always had in the town of Waltham. Farmers continued to till the rocky soil, while other residents worked in the taverns and inns located along the Great Road. At the start of the year, the only mill of any importance was the Waltham Cotton and Wool Factory, whose early profitability masked serious shortcomings that would soon lead to its demise. The most important institution in town was the Congregational Church, whose minister, the Reverend Samuel Ripley, was paid a salary of \$700 a year, raised from local taxes. Five district schoolhouses served the educational needs of the town's children, including one "at the lower factory," built and supported by the Cotton and Wool Company (Town Meeting Records, WPL, reel 5, March 8, 1815, p. 77). Waltham was governed by citizens eligible to vote in the monthly town meetings held in the meeting house. Minutes from these meetings reveal a pre-industrial society still very much connected to the town's Puritan past. For example, on March 14, 1814, Elijah Brigham was paid \$8 for sweeping the meeting house, plus \$5 for digging the grave and attending the funeral of Daniel Mixer (Selectmen's Records, WPL, roll 892246). In early 1814, there was no indication that Waltham would soon be at the forefront of an economic revolution every bit as significant as the political revolution that had taken place in the neighboring town of Lexington just a generation earlier.

The First Factory Schoolhouse

The Industrial Revolution affected all facets of life in Waltham, including the

town's schools. In 1817, the Boston Manufacturing Company began constructing its first schoolhouse: a one-room building on Elm Street, just a stone's throw from the factory itself. The company carefully recorded its building expenses, including \$139.99 for carpentry work, \$22.93 for plastering, \$22 for 4,400 bricks, \$6.60 to carry the bricks, and \$8.80 to lay 3,200 bricks (undoubtedly the 1,200 unaccounted for bricks were put to good use by the corporation; BMC MSS, vol. 13, pp. 127, 136, 149). Even as small an expense as \$1.25 for two pairs of fire irons was duly recorded in the company's books (BMC MSS, vol. 13, p. 147). All told, the Boston Manufacturing Company spent \$584.24 to construct its first schoolhouse in Waltham (BMC MSS, vol. 10, p. 164).

In 1860, the local newspaper, the *Waltham Sentinel*, published the detailed reminiscences of James Moore, who attended the factory school as a young boy during the 1820s. His remarkable (and lengthy) account provides a glimpse of education inside the factory school during the early years of the Industrial Revolution. This "unassuming temple of learning," as Moore describes it, was a modest, one-story building that faced a cornfield and potato patch (now the Waltham Common). The outer vestibule, covered with students' names and accompanying graffiti, was lined with hooks on which students hung their hats and coats. A brown, dilapidated door led to the classroom itself. The teacher's capacious pine desk, large enough for six boys to fit underneath, sat at the front of the classroom. On the corner of the desk the teacher kept a stack of pupil writing books, many of which bore the quaint admonition, "Touch not this book for fear of shame, For don't you see the owner's name?" The floor rose steeply from the front to the back of the classroom so that students sitting in the back could touch the ceiling. The boys sat on one side of the room; the girls, on the other. The worst punishment that the teacher could inflict on a misbehaving student, according to Moore, was to move a boy's seat to the girls' section, or vice versa. Those students who suffered this cruel fate "called upon

themselves the sharp, tormenting ridicule of the whole school” (Moore, 1860, p. 1).⁷⁹

Moore (1860) describes one of the factory school’s unique possessions: a model of the solar system constructed in the machine shop of the Boston Manufacturing Company. The sun was approximately ten inches in diameter; the planet Mercury the size of an apple. The apparatus, which “created as much of a sensation in the minds of the pupils as the original in the mind of father Adam” (p. 1), was suspended from the ceiling above the master’s desk. The planets were designed to orbit around the sun. Unfortunately, the model never worked properly, and the celestial bodies that once hung majestically in the factory school were eventually “bowled most recklessly up and down the street in front of the schoolhouse by contending parties of boys” (Moore, 1860, p. 1).

Moore recalls the school day itself as being exceptionally tedious and dull with little to captivate the students’ interest. The younger pupils would stare morosely at *Mrs. Barbauld’s Easy Lessons*, while the older students would use such books as *Murray’s Reader*, *Murray’s Grammar*, *Scott’s Lessons*, *Adams’ Arithmetic*, *Cummings’ Geography*, and *Pierpont’s First Class Book*. During the writing hour, the teacher kept busy using a sharp penknife to reshape the students’ spattering quill pens. There was no blackboard and no chalk. The factory school, according to Moore, instilled in students working-class virtues such as hard work, perseverance, and self-reliance. The students had little doubt as to where they would spend their lives: “The boys, when speculating on the future, were not apt to ask each other, ‘Whose clerk shall you be?’ ‘What divinity school shall you

⁷⁹ Dr. Ebenezer Hobbs, who served as agent of the Boston Manufacturing Company for forty years, described the factory schoolhouse in slightly different terms than did Moore. In a letter to the state board of education reprinted in the *Waltham Sentinel* (March 23, 1860), Hobbs wrote, “Before a spindle was started, or any certainty of success could be obtained, the Manufacturing Company erected a schoolhouse large enough to be divided into two apartments - one for the children of families collected about the establishment, and the other for evening instruction for the adults employed in the mills. These schools were kept for a number of years at the expense of the company, and were not put under the care of the town committee until, by the exertions of Hon. Horace Mann and his associates, the town schools seemed to be superior to those of the company” (p. 2).

enter?’ ‘Whose office for the law, and whose studio for the arts?’ But the questions asked were, ‘What winding staircase shall you trot up as a bobbin boy?’” (Moore, 1860, p. 2).

In comments made at a school reunion, the most illustrious pupil to attend the factory school, Nathaniel P. Banks (who would go on to serve as governor of Massachusetts, Speaker of the U.S. House of Representatives, and a Civil War general), supported Moore’s view that the school’s primary focus was discipline. Banks commented on the rapid turnover of teachers in the factory school, comparing them to a flock of geese. However, one teacher, Harriet Lane, made a strong impression on him. Banks admitted that he did not “learn much of books, but her character made an impression upon me never to be forgotten. She knew perfectly well how to govern children and how to impress upon their minds good principles” (*Waltham Sentinel*, 1860, p. 2).

At the conclusion of the winter term, members of the school committee visited the factory school to measure the academic achievement of the students. Moore’s narrative conveys the excitement and anxiety that students, parents, and teachers felt on examination day, the high-stakes test day of the nineteenth century. A contingent of volunteer female students scrubbed the classroom clean the night before and trimmed the bare walls with evergreens. For the schoolmaster, examination day was a trial. Would the school committee judge him a success or failure? Parents gathered expectantly in the front of the schoolroom, eager to see their sons and daughters demonstrate their knowledge. Students, dressed in their Sunday best, were also apprehensive, closely eyeing the members of the school committee, described by Moore as a “dignified, portly platoon of [the] most substantial citizens of the town.” Once the exercises commenced, the school committee quizzed the students in reading, spelling, parsing, history, natural philosophy, arithmetic, abbreviations, oratory, and writing. Upon conclusion of the examinations, the chairman of the school committee rose from his seat, “and in solemn tones expresses his satisfaction” (Moore, 1860, p. 1).

When the factory school opened, the town of Waltham voted to discontinue the Cotton and Wool Factory school district and create a new Boston Manufacturing Company school district (Town Meeting Records, WPL reel 5, April 7, 1817, p. 104). At this time, there were three governing bodies that divided administrative control over Waltham's five school districts: the town meeting, which controlled the school budget; the school committee, which determined the curriculum and ensured that state laws were implemented; and a separate prudential committee for each school district, which oversaw the day-to-day operation of the schools (Woytanowitz, 1978). In 1817, voters at the town meeting selected Patrick Tracy Jackson, a major investor in the Waltham factory and Francis Lowell's brother-in-law, to serve as a one-man prudential committee for the factory school district (Town Meeting Records, WPL reel 5, April 7, 1817, p. 104). Undoubtedly Jackson's responsibilities as treasurer and clerk of the Boston Manufacturing Company left little time for overseeing the factory school. Therefore, in 1819, the town meeting selected three men to replace Jackson on the prudential committee, including Paul Moody, the master mechanic of the Boston Company who was instrumental in the construction of the first American power loom (Town Meeting Records, WPL reel 5, April 5, 1819, p. 145). The selection of prominent men such as Jackson and Moody, and their willingness to serve on the prudential committee, illustrates the importance placed on education by the fledgling Waltham corporation.

One of the more interesting entries in the records of the Boston Manufacturing Company is a single reference to a teacher being paid \$9.75 for teaching Sunday school in 1818 (BMC MSS, vol.13, p. 218). Who attended this school? Was the curriculum religious or secular? Why did the company stop funding the Sunday school shortly after its inception? Unfortunately, the company records are silent on these questions. Perhaps the Boston Associates were following the lead of fellow industrialist Samuel Slater, who offered young employees a Sunday school in which they were given basic instruction

in reading and writing and taught such virtues as obedience, punctuality, and honesty (Tucker, 1984). For whatever reason, the Sunday school did not suit the purposes of the Boston Associates and was discontinued after only nine months of operation.

Other Factory Schoolhouses

The Boston Manufacturing Company was not the only factory in Waltham to operate its own school during the 1810s. In 1815, the Waltham Cotton and Wool Factory, located about a mile downstream from Francis Lowell's corporation, was a prosperous company of more than 200 employees, including 150 women and children (Ripley, 1815). A local minister, Samuel Ripley (1815), described the Cotton and Wool Factory as "free from the disorder and immorality" often found in other factories and managed by a superintendent who promoted

virtue, subordination, and industry among his people. The proprietors support a school for the instruction of the children and youth employed in the factory. A school is taught six months by a woman, and in the evenings by masters during the winter. (p. 264)

After purchasing the Cotton and Wool Company in 1819, the Boston Associates demonstrated their commitment to education by continuing to operate the public school previously established by the factory. In fact, as late as 1839, the Abstract of Massachusetts School Returns (1838-1839) reported that this school and the factory school on Elm Street (District Two) were "supported wholly by the Boston Manufacturing Company" (p. 82).

In 1837, the Boston Manufacturing Company constructed a new building to

replace its original schoolhouse on Elm Street. This modern stone building was the second public schoolhouse built by the Boston Associates in Waltham.⁸⁰ Reverend Ripley described it in a letter to Horace Mann as “a neat, handsome, modern, stone building two stories high, one room for an infant school, the other for the district school” (Mailloux, 1957, p. 158). The stones used to construct it were “ledge stone for a schoolhouse with granite blocks with square ends suitable for the corners of the building” (BMC MSS, vol. 6, p. 92). Construction costs totaled \$971.95, including \$256.75 for stone, \$259.61 for lumber, \$356.69 for labor, \$3 for two dead locks, \$6.93 for nails, and \$16.50 for glass (BMC MSS, vol. 11, pp. 181, 183, 187; vol. 16, pp. 1476, 1486).

For many years, residents of Waltham considered this company-constructed and supported school building to be the town’s best. In their annual report for 1845-1846, the members of the school committee praised the school, reporting that,

There is but one school in town, which may be said to be *good*, and *suitable* for the purpose for which it was erected, and comfortable for the teacher and the children. This is in No. 5, built by the Man. corporation. This is the only house in which the children seem to be comfortable in their seats. . . it is the only house, which on entering, your Committee find [*sic*] perfectly neat and well ventilated in summer, and warmed at a proper temperature in winter. (Annual Report, 1846, p. 9)

Construction costs for school buildings were not the only educational expenses incurred by the Boston Manufacturing Company. Maintenance bills, fuel costs, textbooks, and other incidental expenses had to be paid. Occasionally, the company records list specific school expenses: \$39.62 for books, \$13.04 for cutting and trimming wood in the school yard, \$1.50 for whitewashing the schoolhouse, \$5.23 for fuel, \$23.80

⁸⁰ Or possibly the third, if Mailloux (1957) and the *Waltham Sentinel* (1857) are correct (see p. 123).

for paint, and \$16.80 for glass (BMC MSS, vol. 11, pp. 152, 158; vol. 14, p. 670; vol. 15, p. 961). More often, school expenses were grouped together under listings such as “schooling paid sundry bills,” making it impossible to determine the exact nature of the expenditures (BMC MSS, vol. 14, p. 521). While the corporation’s school expenditures may seem modest, it is interesting to note that the Boston Manufacturing Company was the only firm in the state mentioned in the Abstract of the Massachusetts School Returns for 1837 that contributed funds for public education - \$250.

***Additional Contributions to Public Education by the
Boston Manufacturing Company***

By far, the Boston Manufacturing Company’s most significant educational expense was teachers’ salaries. In November 1817, the first entry for a teacher’s salary appears in company records: “paid S. Burroughs for one month keeping school ending this day (November 15) [\$]12” (BMC MSS, vol. 13, p. 154). For the next twenty-six years, the Boston Manufacturing Company paid the salaries of those teachers employed in the factory schools. The company’s interest in education was noted in the *American Federalist Columbian Centinel* (1822), which commended the firm for supporting “two teachers through the year for the education of the children, who, instead of being confined in the mills, as is generally the case at Manufactories, are kept constantly at school” (p. 2). The Reverend Ripley, in a letter to Horace Mann in 1839, also praised the Boston Manufacturing Company for having “always employed the best teachers & paid the highest wages” (Mailloux, 1957, p. 157). The early records of the company list the teacher’s name and salary for each month. For example, for almost three years, Burroughs’ name appears at the end of each month, earning the same salary of \$12. However, as the company expanded and its expenses multiplied, the educational records become somewhat muddled. The high turnover rate among teachers working in the factory

schools further exacerbates the problem. By 1821, a neat line item for each month clearly listing the name and salary of the teacher no longer exists. Instead, several months of salaries are often bundled together in one line item, with no indication given as to who is being paid and for what months. This becomes especially problematic beginning in the 1820s when the Boston Manufacturing Company operated three schools in two school buildings and employed three teachers (two primary school teachers and one sub-primary school teacher). For instance, in February 1839, the Boston Manufacturing Company paid \$70.39 to the schoolmaster and \$84.50 to the schoolmistress (BMC MSS, vol. 16, pp. 1541-1542). The next entry for teachers' salaries, \$222.25, is recorded on August 31, with no indication as to who received what money or for what months (BMC MSS, vol. 16, p. 1556).

To defray a portion of the cost of operating its public schools, the corporation received a small annual subsidy from the town of Waltham. When its first school was opened for the 1817-1818 academic year, the Boston Manufacturing Company "rec'd of S. Clark (Town Treasurer) as our proportion of the money raised in Waltham for the support of schools [\$]86.13" (BMC MSS, vol. 13, p. 185). For the next twenty-one years, the town partially reimbursed the company for expenses incurred in educating the children in the factory schools. The corporation received its last reimbursement, \$225, from the town treasurer on February 28, 1839 (BMC MSS, vol. 16, p. 1540). All told, from April 1818 through February 1838, the town reimbursed the Boston Manufacturing Company \$3,735.66 for educational expenses (BMC MSS, vols. 11, 13, 14, 15, 16).

The School Committee's Evaluation of the Factory Schools

The Waltham School Committee's annual reports provide further information on the state of education in the company-sponsored schools. During the 1842-1843 school year, 168 children attended the three factory schools, with one teacher employed in each school. The school committee reported that the sub-primary school was in a "flourishing

state,” the primary school at the Boston Manufacturing Company “may now be said to rank as one of the first in discipline and attainment,” and the Bleachery school, “although it has ever been one of our poorest schools...is much better than formerly” (Annual Report, 1843, p. 5).⁸¹

Throughout the following year, however, controversy enveloped the factory schools. After noting that schools in Waltham “have all suffered from unusual interruptions,” the school committee proceeded to criticize the students attending the stone schoolhouse for their “exceedingly disorderly and insolent” behavior and labeled the Bleachery school “unusually backward, and its advancement is slow” (Annual Report, 1844, p. 4). Town voters rejected the school committee report and appointed a committee to investigate the matter. The report of the investigating committee defended Waltham’s schools, criticizing the school committee report for its “exhibitions of personal feeling, of private animosity, of party prejudice, of malicious denunciation” (Annual Report, 1844, p. 4).

After the troubles of 1843-1844, the factory schools were once again in the good graces of the school committee and were often commended in its annual reports. In 1851-1852, the school committee credited the teacher employed in the stone schoolhouse with advancing the quality of instruction, stating that “the School has steadily improved and is now in very much better order than it was one year ago. The present Teacher is deserving a large share of the praise” (Report, 1851-1852, p. 5). By 1855-1856, the committee reported that the sub-primary school at the Boston Manufacturing Company was prospering “under the care of [a] faithful and enthusiastic teacher,” the primary school “has been improving, and we hope may attain a more satisfactory position,” and the Bleachery school “still maintains its high position” (Report, 1856, p. 4).

It is worth noting that although the annual reports generally present a positive account of education in Waltham, they are by no means Pollyannaish in their tone

⁸¹ The Waltham School Committee did not begin to issue annual printed reports until 1842.

and message. When necessary, members of the school committee were not averse to criticizing students, teachers, and even parents for their perceived shortcomings. For example, in 1843, the school committee reported that the school in District One “ranks lowest in point of discipline and attainment” (Annual Report, 1843, p. 4). In 1857, the committee criticized the teacher in the District Three schoolhouse for “lack[ing] the power...of bringing the unruly and disobedient into subjection,” while noting that in the District Five factory school there was “a strong spirit of restlessness among the children, amounting almost to contempt of authority” that was encouraged by some parents who were “undermining the teacher’s influence” (Report, 1856-1857, p. 5). The members of the school committee seldom commented on curriculum and teaching, choosing instead to focus on students’ attendance and behavior.

Corporate Support of Adult Education:

The Rumford Institute for Mutual Instruction and the Manufacturers’ Library

One of the unique features of the Boston Manufacturing Company that attracted the attention of nineteenth century observers was the character and intelligence of its operatives. Unsurprisingly, company executives were particularly effusive in their praise. Nathan Appleton (1858) contrasted European factory workers, who “were notoriously of the lowest character, for intelligence and morals,” with the “well educated and virtuous” mill girls who worked in Waltham (p. 15). Long-time Boston Company agent Ebenezer Hobbs credited Francis Lowell with convincing his partners of “the importance of taking measures early to secure that attention to education and morals which he believed to be the corner stone [*sic*] of any permanent success in the business they had undertaken” (*Waltham Sentinel*, March 30, 1860, p. 2). Hobbs noted that many employees had enjoyed successful lives as a result of the Boston Company’s educational programs, and some had “risen to be members of our State Legislature, members of Congress, and, in

one instance, Governor of the State” (p. 2). In addition, the workers were commended in the press. The editors of the *Waltham Mirror* commented on the “well read and well educated” (Aug. 3, 1848, p. 2) mill girls employed by the Boston Manufacturing Company, asserting that “some of the most intelligent and amiable young ladies of the community are engaged as operatives in our cotton mills” (Dec. 14, 1848, p. 2). Visitors to Waltham were also impressed with the employees of the Boston Company. Harriet Martineau (1837/1966) wrote approvingly of the appearance of Waltham’s mill girls, while Carl Bernhard (1825/2011), the Duke of Saxe-Weimar-Eisenach, noted that the workers were “well liked throughout this entire district for their good habits, and are generally held in high esteem for their morality” (p. 78).

The only school that the Boston Manufacturing Company seemed to have frowned upon was a local dancing school. When British writer Harriet Martineau (1837/1966) visited Waltham during her tour of the United States, she noticed a sign in the Waltham factory “warning that no young lady who attended dancing-school that winter should be employed: and that the corporation had given directions to the overseer to dismiss any one who should be found to dance at the school” (p. 356). When Martineau inquired about this company policy, the overseer told her that during the previous winter, some of the young employees had danced until two or three o’clock in the morning and were then “unfit for their work the next day” (p. 356). To soften the blow of the ban on attending dancing school, the overseer promised the workers that once a new room in a local hotel was constructed, dances would be held every two weeks. However, the dances would break up early, and, most likely to the chagrin of the young workers, the overseer and his wife would also be present. “We will all dance together,” the overseer promised (p. 357).

The Rumford Institute for Mutual Instruction

To attract workers to their mill, and to fulfill their republican vision of an

educated, self-respecting work force, the Boston Associates supported a lyceum and a library in Waltham for the use of factory operatives and town residents. In 1826, the Rumford Institute for Mutual Instruction was founded by employees of the Boston Manufacturing Company. One of the first lyceums in the United States, the Rumford Institute sponsored lectures, discussions, debates, and concerts, and soon became a “potent influence in social, moral, and educational affairs” in Waltham (Warren, 1893, p. 4). In 1827, the Boston Manufacturing Company constructed the Rumford Building at the corner of Main and Elm Streets, just one block north of its mill. The agent of the company, Ebenezer Hobbs, forwarded a letter to the institute, offering to

let the Hall to said Society for all lectures and other meetings of said Rumford Institute for the sum of sixty dollars per year...which sum is to be expended by the Society in the purchase of books for said Society. (Rumford Institute, Feb. 12, 1857, p. 1)

By January 1828, the institute had 108 members, 90 of whom were women. In 1850, the company dedicated a substantial sum (over \$2,500) to remodel the Rumford Building and enlarge and renovate Rumford Hall, where lectures were held on Saturday evenings (BMC MSS, vol. 12, pp. 482-509). Also in 1850, as a further act of generosity, the Boston Manufacturing Company contributed all of the rent derived from the hall above \$50 to the Rumford Institute (Warren, 1893). Four years later, the Boston Manufacturing Company sold the Rumford Building to the town.

Throughout its storied history, the Rumford Institute sponsored lectures by such prominent nineteenth century luminaries as Daniel Webster, Charles Sumner, Edward Everett, Ralph Waldo Emerson, Horace Mann, George Bancroft, Louis Agassiz,

Oliver Wendell Holmes, and Samuel Clemens (Starbuck, 1917). For one of his early appearances in Waltham, Emerson was able to command a fee of \$20 for his lecture “Manners” at the Rumford Institute. Apparently, the institute considered Massachusetts statesman Edward Everett a much better draw, for he was paid \$100 to lecture in 1858 and again in 1860. Lectures were held on Saturday evenings at 7:00 p.m., and one year’s membership to the institute could be purchased for 50 cents (Starbuck, 1917).⁸²

The Manufacturers’ Library

At their annual meeting on October 2, 1821, the directors of the Boston Manufacturing Company appropriated \$500 “towards establishing a Library, for the use of persons in their employ” (BMC MSS, vol. 1, p. 63). They entrusted the Reverend Sewell Harding with the task of selecting appropriate volumes for the new “manufactory library at Waltham” (BMC MSS, vol. 14, p. 534). In an era when public libraries in small towns were scarce and few people could afford books of their own, the use of the corporation’s library was a major benefit for the company’s operatives and made factory life more attractive to those considering working in the Waltham mills. Although most likely an apocryphal account, a biographer of Nathaniel P. Banks relates the story of young “Nat’s” mother telling him that he had to leave school to go to work for the Boston Manufacturing Company. To make the prospect of working in the factory more palatable, Nat’s mother told him, “There is one thing to be thought of for your advantage. You love to read, and the manufacturing company have [*sic*] a good library for the operatives. You can take out books, and read evenings” (Thayer, 1863, pp. 97-98). Harriet Martineau (1837/1966) also commented on the availability of books for the corporation’s employees,

⁸² Horace Mann was somewhat ambivalent about the educational value of lyceums. He felt that lyceum programs might be “interesting and useful,” but were a poor substitute for books. Anticipating the arguments often used against online learning, Mann bemoaned the “partial and fragmentary” knowledge of lyceum lectures, believing that attendees would acquire “superficial, instead of sound views, and of amassing facts merely, instead of penetrating to principles” (Third Annual Report, 1840, p. 78).

praising the company for providing “a lyceum, which they have furnished with a good library, and where they have lectures every winter, - the best money can procure” (p. 248).

In 1830, the Boston Manufacturing Company transferred its Manufacturers’ Library to the Rumford Institute with the stipulation that all members of the institute would have the right to borrow the books. Over the years, the number of volumes in the library steadily increased: approximately 1,000 in 1837, 1,400 in 1848, and 3,700 in 1865 (Warren, 1893, p. 15). The *Waltham Sentinel* considered the library “one of the best things that our town can boast” (Rumford Institute, Feb. 15, 1856, p. 2). Local historian Nathan Warren (1893) speculated that

many a boy who has risen to eminence in his profession can doubtless date back to the Saturday night when the well filled shelves of the Rumford Library were opened to him for his first inspection for knowledge beyond that of the school and the home. (p. 15)

In 1854, the Boston Manufacturing Company sold the Rumford Building to the town and, “as a final instance of its fostering care, relinquished the control over the library” to the Rumford Institute (Warren, 1893, p. 15). In 1865, the Rumford Institute offered its library to the town with the proviso that Waltham establish a free public library. The town accepted the offer. Thus the Manufacturers’ Library can be considered the precursor of the Waltham Public Library.

Comparing Waltham and Lowell

Following their success in Waltham, the Boston Associates proceeded to establish

waterpowered textile mills throughout Massachusetts, Maine, and New Hampshire. When establishing a new corporation, the Associates employed the same organizational system used at the Boston Manufacturing Company. This system, often referred to as the “Waltham system,” featured large corporations, heavy capitalization, and an emphasis on mass production, with young female employees living in company boarding houses. In contrast, textile mills using what was called the “Rhode Island system” were often family owned, minimally capitalized, and engaged in the manufacture of diverse products, with children and families employed and living in tenement houses (Dunwell, 1978, p. 52). Working conditions in textile mills and the quality of life in mill towns varied greatly, depending on such factors as the individual mill owner and the strength of the national economy. However, it is safe to say that no mill owners were as committed to education over an extended period of time as were the Boston Associates in Waltham. Nonetheless, particularly in the decades before the Irish immigration, there are instances of corporations, established by the Boston Associates as well as others, providing a more limited kind of support to public education in mill towns founded after the establishment of the Boston Manufacturing Company in 1814.

One such example is the town of Lowell. Although many of the investors in the Lowell mills were also involved in the Boston Manufacturing Company (with the notable exception of Francis Lowell, who died in 1817), their commitment to education was neither as strong nor as sustained as it was in Waltham. The first textile corporation in Lowell, the Merrimack Manufacturing Company, constructed a school on its own property in 1824 and defrayed all expenses for one year (Josephson, 1949). Two other mills founded by the Boston Associates, the Hamilton Manufacturing Company and the Appleton Manufacturing Company, also built a schoolhouse and paid the teacher’s salary (Merrill, 1874). However, one year after the Merrimack Manufacturing Company opened its school, corporation agent Kirk Boott wrote to the town selectmen, asking

“if the Inhabitants will appropriate the money paid by the Merrimack Manufacturing Company and persons in their employ for supporting the School established by them” (Josephson, 1949, p. 46). By 1832, Lowell was in need of new school buildings due to the town’s rapid growth. The Lowell textile corporations strongly opposed a town meeting proposal to appropriate \$20,000 to build two new schoolhouses. Speaking at the town meeting, Boott claimed that Lowell was already in debt, could not afford such a large expenditure of money, and had already done enough for its public schools. In spite of corporate opposition, the town meeting voted in favor of the school appropriation. At a subsequent meeting held to reconsider the original vote, company lawyers argued that the mill owners would be responsible for paying the lion’s share of this “extravagant appropriation” because of the taxes levied on their large property holdings. The attorneys also claimed that the corporations would derive no benefit from the new schools and that it was unfair to “vote away the property of non-resident proprietors” (Gilman, 1888, p. 95). Town residents rejected the companies’ arguments and once again voted in favor of the expenditure.

Following the “great school fight of 1832,” the Lowell corporations did not accept their defeat with equanimity (Josephson, 1949, p. 45). According to nineteenth century Lowell historian Charles Cowley (1868), when the town meeting voted in favor of the appropriation, company executives had nothing to do with “the schools thus erected contrary to their sovereign will and pleasure” (p. 105). The Lowell corporations even went so far as to seek revenge against the Reverend Theodore Edson, rector of St. Anne’s Church and member of the Lowell School Committee, who was a leading advocate of the school proposal. When the lease on St. Anne’s Church expired, the Lowell Locks and Canals Company demanded payment for the church property, even though it had originally been billed as a corporate gift to the community. In a singularly vindictive move by the Merrimack Manufacturing Company, Edson was evicted from the church

rectory until 1866, when his congregation finally raised enough money to purchase the parsonage (Josephson, 1949).

It is also interesting to note the reactions of townspeople in Lowell toward the massive mills lining the Merrimack. A local newspaper, the *Mercury*, recognized that the town was completely dependent on the cotton mills and that to oppose their interests would be “suicidal” (Josephson, 1949, p. 53). Dr. Elisha Bartlett, the first mayor of Lowell, noted that the community was controlled by outside interests whose “proprietors do not reside among us” and whose “profits are not expended among us” (Josephson, 1949, p. 53). Prominent Massachusetts Democrat, Civil War general, and Lowell native Benjamin Butler struck a similar theme when he stated, “our city has been a hive of industry, and as a rule, the honey has been gathered by others” (Brown, 1976, p. 145). Cowley (1868) sarcastically wrote that it took a visit from Henry Clay for “their High Mightinesses [corporation executives]...to let the light of their countenances shine for a moment on the benighted little Hottentots that filled the North and South Grammar Schools” (p. 105). Clearly, some Lowell residents harbored strong feelings of resentment towards the giant corporations in their midst, in part due to the manufacturers’ meager support of local schools.

What accounts for the difference in the educational policies of the Boston Associates in Waltham and Lowell? Part of the reason may be the untimely death in 1817 of Francis Lowell, a man “beloved and respected by all who knew him” and “especially devoted to arrangements for the moral character of the operatives” (Appleton, 1858, p. 15).⁸³ While Francis Lowell was the “informing soul” of the Boston Company, the Associates chose Kirk Boott to oversee their factory community in Lowell. Boott, a

⁸³ Lowell probably died from pneumonia. In a letter to Francis’s brother John Lowell, Samuel Gardner (Francis’s brother-in-law) wrote that on a trip to Niagara Falls, Francis “took a severe cold which produced an inflammation of his lungs.” He returned to Waltham, and then went to Boston when he “began to be more sick and declined very rapidly” (FCL papers, MHS, folder 9.4, August 4, 1817). He died on August 10th, 1817.

principal stockholder and agent and treasurer of the Merrimack Manufacturing Company, was an iron-willed, authoritarian man with a commanding manner. A contemporary described him as the “master spirit of the place” (Miles, 1845/1972, p. 228). According to his personal physician, Dr. John Green (1888), Boott’s role in the development of Lowell was all-encompassing: “engineer, architect, draughtsman, conveyance or clerk, moderator of town meetings, representative in the legislature” (p. 111). When Boott arrived in East Chelmsford, the town already had a district school system in place, which he augmented with two factory schools. In Boott’s mind, this was more than adequate to meet the needs of his workers, most of whom were young, transient single women who were expected to work in the mills for a temporary period and then return to their families or get married (Mitchell, 1991). For these reasons, Boott showed little interest in promoting education, believing that the town “had done for public schools what was required; they [the schools] were proper and sufficient for the poor, but would never serve for the better sort of the community” (Gilman, 1888, p. 93).

Lowell’s rapid growth may have also discouraged any sustained corporate support for public education. During the 1820s, the textile industry overwhelmed Lowell, sweeping away the past and creating an entirely new industrial community dominated by out-of-town businessmen. In Lowell, the mill owners were in a dominant position, with little incentive to curry favor with long-time residents. As Mayor Elisha Bartlett glumly pointed out, “The graves of our fathers are not here. The haunts of our childhood are not here...The large and gradually accumulated fortunes of nearly all our older towns are not to be found here. The great mass of wealth which is centered here, and which has made our city what it is, is owned abroad” (Lipchitz, 1976, p. 100).

Such was not the case in Waltham. As newcomers in a stable, long-established community, the Boston Associates may have felt an obligation to offer financial support to the town, many of whose residents lived on the same small farms that had been

cultivated by their great-grandparents. Waltham was never a classic mill town, created by a corporation to serve corporate interests. Rather, the history of Waltham reached back to the earliest days of the Massachusetts Bay Colony when Governor John Winthrop led an expedition near the banks of the Charles River in 1631. By the time the Boston Manufacturing Company opened in 1814, Waltham's history stretched back almost two hundred years, first as a precinct of Watertown and later as an independent town. It is also important to keep in mind that the sluggish current of the Charles River restricted the growth of the Boston Manufacturing Company. Due to these factors, Waltham's economy was never completely dependent on the textile industry, thereby lessening the potential conflict between the townspeople and industrialists.

It is also interesting to compare the opinions Waltham townspeople had of the mills with those of Lowell residents. The resentment often expressed by citizens of Lowell towards the wealthy businessmen who dominated their town is conspicuously absent among the citizens of Waltham. Without exception, local historians and other nineteenth century residents of the town lavishly praised the Boston Associates for their efforts in support of education in Waltham. The *Waltham Sentinel* commended the Boston Manufacturing Company for providing "all the families in their employ an opportunity to send their children to free schools; beside, others, not employed by them, were not denied the privilege of attending school" (Waltham as it was, 1862, p. 1). Local historian Charles Nelson (1879) claimed that company support for education could be attributed to the unwillingness of the Associates to have their factory "surrounded by the vice and poverty that prevailed in the manufacturing towns in England" (p. 131). In a publication of the Waltham Board of Trade, Ephraim Barry (1887) credited the Boston Manufacturing company with establishing "schools for the benefit of the working people," which proved that "at least one corporation has a soul and that it was greatly interested in the welfare and improvement of those within its care" (pp. 70-71).

Of course, in their effusive praise of the owners of the Boston Manufacturing Company, some Waltham historians (Barry, 1887; Stone et al., 1893; Warren, 1890) have engaged in typical hometown boosterism. Proud of their city's role in the Industrial Revolution, these historians romanticize its past and believe the Boston Associates were driven by only the purest of motives. What is striking, however, is the complete absence of any criticism of the Boston Associates by local townspeople *over the past two hundred years!* Without exception, all local historical accounts of the Boston Associates and their Waltham corporation are positive in nature.

Even Horace Mann, secretary of the Massachusetts Board of Education, commended the Boston Manufacturing Company for its commitment to education. After criticizing factories that ignored the state's newly enacted child labor law, Mann singled out the Waltham company for having "gratuitously erected three schoolhouses, - the last one in 1837, a neat, handsome, modern, stone building, two stories in height, - and maintained schools therein at a charge, in the whole, upon corporate funds, of a *principal* sum of more than seven thousand dollars" (p. 42). He applauded the company for its "generous acts" and regretted that "the identity of the individual members, who have performed these praiseworthy deeds, should be lost in the generality of the corporate name" (Third Annual Report, 1840, p. 42).

In other textile towns, the degree of company support for education varied greatly. In Rhode Island, young children employed in Samuel Slater's mills attended Sabbath schools on Sundays after working the previous six days (Tucker, 1984). In Lawrence, Massachusetts, the Essex Company donated land for the construction of eleven schools, and also rented a one-room schoolhouse to the town (Cole, 1963). In 1855, a Fall River mill agent set a new standard for corporate arrogance when he stated,

I regard my work-people just as I regard my machinery. So long as they can do my work for what I choose to pay them, I keep them, getting out of them all I can. What they do or how they fare outside my walls, I don't know, nor do I consider it my business to know. They must look out for themselves as I do for myself. When my machines get old and useless, I reject them and get new, and these people are part of my machinery. (Ware, 1959, p. 77)

How strange such words seem when juxtaposed with the philanthropic sentiments expressed by the founders of the Waltham mills four decades earlier!

The End of an Era

In 1825, the Boston Associates provided approximately 25 percent of the school funding in Waltham, contributing \$420 out of a total school budget of \$1620 (Bangs, 1826). However, the high percentage diminished over the years, a result owing less to corporate stinginess than to population growth brought on by industrialization. As Waltham's population grew, the town continued to construct schools. When the Boston Manufacturing Company built its first school in 1817, there were only five school districts in Waltham. By 1860, there were 10 school districts containing 17 schools housed in 11 buildings (Annual Report, 1860, p. 3).

In its first 10 years of operation, the Boston Manufacturing Company achieved a level of success unmatched by any subsequent New England textile corporation. In 1816, demand for Waltham-produced cloth was so great that it sold for 30 cents a yard (Josephson, 1949). During the early 1820s, the company earned a profit of nine cents on every yard of cloth sold (Dalzell, 1987). With strong demand for its cloth resulting in soaring profits for investors, the Boston Manufacturing Company was in a position to fund community improvements - building churches, constructing roads, planting

trees, purchasing a fire engine, promoting a library and a lyceum, and supporting public education.

The success of their Waltham factory encouraged the Boston Associates and others to construct additional textile mills throughout the northeast. By 1860, virtually all of New England's rivers provided power to spin and weave cotton cloth. The large-scale expansion of the textile industry resulted in dwindling revenue and smaller profits for investors. In Waltham, cloth that sold for 30 cents a yard in 1816 brought only six-and-a-half cents by 1845; the nine cents per yard profit of the 1820s dwindled to a half cent a yard by the 1850s (Dalzell, 1987; Josephson, 1949). In order to remain profitable in the highly competitive textile industry of the 1850s, mill owners had to watch every penny and look for the smallest of savings. Under such conditions, allocating scarce company funds to support education was a luxury they could no longer afford.

Corporate support for public school funding in Waltham ended in 1864, when the Boston Manufacturing Company's agent requested that the town vacate the old stone schoolhouse adjacent to the mill, thus bringing to a close the corporation's almost 50-year history of involvement in education. The members of the Waltham School Committee recognized this as the end of an era and commended the company for its past generosity and support of public education. Their statement serves as a fitting epitaph for the educational support provided to the town of Waltham by the Boston Associates:

We cannot close these remarks without adverting for a moment to the liberality practiced by the Agents of the Boston Manufacturing Company, in furnishing accommodations so ample for educating the children of this section of our town. A house has been furnished by the Company for more than forty years, and for many of the first years of this time they furnished teachers, fuel, and all the para-

phernalia of the schoolroom; - a munificence rarely met with in manufacturing villages. We hope our Town at no distant day will tender a vote of thanks to the *Boston Manufacturing Company* for thus extending their liberal hand for so noble a purpose. (Annual Report, 1865, pp. 11-12)

In 1893, Waltham recognized Francis Cabot Lowell's commitment to education by naming a school in his memory.



Ten years after its inception, the Boston Manufacturing Company no longer set the standard by which other textile mills were measured. A story in the *Providence Patriot* (Oct. 12, 1822) regarding a drought that caused “great injury to the profits” (p. 2) of the corporation hinted at the lack of waterpower that plagued the Boston Company throughout its history. The company continued to modestly expand until the early years of the twentieth century, using steam engines to augment the erratic power of the Charles River. However, the fame enjoyed by the Boston Manufacturing Company during its first decade in operation proved to be fleeting. Soon, massive textile mills constructed in other towns located on larger rivers with more powerful waterfalls pushed Waltham off center stage and into the category of an ordinary mill town. Politicians and European travelers who at one time journeyed to Waltham to see for themselves the crown jewel of the American Industrial Revolution now made the obligatory pilgrimage to Lowell, the “rising queen of the textile industry” (Josephson, 1949, p. 35). In Waltham, the Boston Manufacturing Company soldiered on in relative obscurity for another hundred years, providing steady employment to generations of local residents. However, by the mid 1820s, the company's glory days already lay in the past.

Like others who came of age in the post-Revolutionary War era, the Boston

Associates were patriotic men who recognized the importance of education in safeguarding the American republic. They believed, according to a “Communication” published in the *American Federalist Columbian Centinel*, that the security of religion and liberty depended “upon the diffusion of true and useful knowledge.” Therefore, their efforts “to inculcate upon the minds of children and youth the rudiments of learning, and to furnish those of adult age with the means of literary, social, moral, and religious improvement” were “Worthy of Imitation” (“Worthy of Imitation,” 1822, p. 2). The patriotism of the Associates and their belief in the importance of public education were reflected in the architecture of the stone schoolhouse.⁸⁴ The schoolhouse resembled a small Greek temple, with a large pediment resting on four Doric columns. Campbell (1996) links Greek Revival architecture with patriotism, asserting that those who built in this style were “pledging allegiance to the United States” (pp. 46-47). According to Campbell, Americans thought of their nation as the new Greece, reviving the democratic traditions of that ancient civilization. The use of large stones and solid granite blocks to construct the building is also interesting, suggesting the importance that the Associates placed on public education in Waltham. While the Associates never publically commented on the architecture of the stone schoolhouse, its style unmistakably symbolized their love of country and belief that an educated citizenry was indispensable to the future of the nation.

Although its national profile and profits diminished throughout the antebellum era, the Boston Manufacturing Company continued to play a positive role in Waltham, particularly in the field of education. The scale of the company’s generosity and the breadth of its involvement in the community are an important part of its legacy. They stand as a testament to the large and generous civic vision that the Boston Associates

⁸⁴ A photograph of the stone schoolhouse is in the collection of the Waltham Historical Society and is reprinted in Petersen (1988).

exhibited in antebellum Waltham.

CHAPTER 8: CONCLUSION AND IMPLICATIONS

In 1794, Henry Wansey, an Englishman on a tour of the United States, traveled through Waltham on his journey from Boston to New York. His description conveys a sense of the hardscrabble lives led by people residing in an isolated, rural community in the late eighteenth century:

Three miles more brought us to Waltham, a struggling village; here I was shown, at the house where we stopped, some home-spun American cloth; it was kersey wove, made very stout, and large spun, but serviceable; they could fix no price to it per yard. The road now became unpleasant for some miles; the fences were only rude stones piled up loosely as if only removed out of the way. (p. 31)

For the next twenty years, Waltham remained the “struggling village” of Wansey’s description. The population grew slowly, from 882 residents in 1790, to 903 in 1800, to 1,014 in 1810 (Vital Records, 1904). Virtually all residents were of English descent, with a handful of families predominating: Sanderson, Stearns, Gearfield, Wellington, Child, Smith, Harrington, and Brown. These families were the backbone of the town, which was populated by yeoman farmers whose lives conformed to the rhythm of the seasons. On Sundays, they worshipped at the Congregational Church, a tax supported institution that served as the spiritual center of the community.⁸⁵ The church also provided local residents with a place to socialize and gather for town meetings. Although Waltham’s citizens gained political freedom with the defeat of Britain in the Revolutionary War, their daily lives remained the same as they had been throughout the colonial period. However,

⁸⁵ Maintenance expenses for the meeting house and the minister’s annual salary (\$700) were paid with tax money.

in 1814, Waltham residents unknowingly stood at the cusp of a major turning point in American history, a time when the agrarian republic envisioned by Thomas Jefferson began to recede in the face of the Industrial Revolution.

A hint of what was to come appeared in the form of an advertisement in the *Boston Patriot* on February 16, 1814:

Bricks Wanted. Wanted, 400,000 Merchantable BRICKS, to be delivered at Waltham, or at Watertown Bridge, by the first day of July next, or as soon as they can be Burnt in the spring, for which the cash will be paid on delivery. Any person desirous to contract for the whole, or a part of the above, will please apply to P. T Jackson, No. 64 BroadStreet. (p. 4)

Surely discerning Waltham residents who saw the advertisement were taken aback by its message. After all, 400,000 bricks! In all of Waltham there were but 120 houses, only seven of which were constructed of brick (Ripley, 1815). And in a community as parochial as Waltham, where families wore their longevity in town as a badge of honor, the name at the end of the advertisement, P. T. Jackson, must have raised eyebrows. Who was this P. T. Jackson? And why did he need so many bricks?

Possibly the advertisement was also read, with trepidation, by Enoch Wiswall, John Holland, and Samuel Coverly, the proprietors of the Waltham Cotton and Wool Company. Exactly four years earlier (February 15, 16, and 17, 1810), they raised their large wooden cotton mill on a small waterfall on the Waltham/Watertown line (Sanderson, 1957). Undoubtedly, as businessmen, Wiswall, Holland, and Coverly would have recognized P. T. Jackson's name and have heard that a wealthy group of Boston merchants planned to erect their own textile mill a mile upstream. When they first saw

the advertisement for 400,000 bricks, were the Cotton and Wool Company proprietors cognizant of the mortal danger that the Boston Manufacturing Company posed to their own fledgling cotton mill? Were Wiswall, Holland, and Coverly confident in their ability to match business wits with Lowell, Jackson, and Appleton?

Soon the bricks arrived, and a massive mill, much larger than any other building in town, began to take shape. One can only guess at the fevered talk of the townspeople on Sunday mornings in 1814 as they waited outside the meeting house for the church doors to swing open and the Reverend Ripley to begin the service. Perhaps worshippers conversed with Christopher Gore and Theodore Lyman, respected citizens with business and political connections in Boston, to ask questions and discover what they knew of the new corporation. How would this new company affect their lives? Had anyone spoken with Mr. Lowell, or Mr. Jackson, or Mr. Appleton? Who were they going to hire as their workers? And was it really true that these Boston businessmen had pledged \$400,000 to launch their business?

Within five years, it was quite evident that the Boston Manufacturing Company was not just another textile mill. The arrival of the company in 1814 and its continuous growth throughout the antebellum period was a transformative event in Waltham's history, affecting virtually every aspect of life in the community. In addition to its impact on Waltham, the opening of the Boston Company also affected the United States, marking the beginning of the American Industrial Revolution.

This chapter highlights the significant local and national changes that occurred in the antebellum era due to the Boston Associates and their first industrial corporation, the Boston Manufacturing Company. The chapter also reviews the theoretical perspectives discussed in chapter 2, and suggests an interpretation based on the available historical data. Implications for the study of educational and industrial history, and for twenty-first century public/private educational partnerships, are also discussed.

Local Changes

Had Rip Van Winkle been a Waltham resident in 1810 and fallen asleep for 50 years, he would no longer have recognized the town of his youth. In half a century, the Boston Manufacturing Company had transformed Waltham from a sparsely populated agrarian village to a busy industrial community. The homogeneous English population of 1810 had disappeared, and newcomers with names like Donovan, Daley, and Driscoll now lived in close proximity to the Livermores, Lymans, and Lowells (U.S. Federal Census, 1860). Rapid growth even necessitated the need for a new cemetery, since the old burying ground, in continuous use since 1703, was no longer sufficient to meet the town's needs (Sanderson, 1936).

Urbanization

The impact of the Boston Manufacturing Company on the town of Waltham is vividly illustrated in a series of maps chronicling the town's development between 1738 and 1854. A 1738 map, the year in which Waltham was incorporated as a town, shows an agrarian community without a clearly defined town center (Sanderson, 1936).⁸⁶ Waltham's southern boundary follows the winding contour of the Charles River, whose two waterfalls had yet to be tapped for power. The Great Country Road is seen just north of the river, connecting Waltham with Boston to the east and New York to the west. Several small mills are shown along Beaver Brook, Chester Brook, and Stony Brook, while the meeting house stands near the geographic center of the town. Included on the map are the long forgotten names of hills, meadows, and other places that harken back to the community's Puritan roots.⁸⁷

⁸⁶ The information in this paragraph is based on a map drawn by Waltham historian Edmund Sanderson in 1935.

⁸⁷ Among the more colorful names are Devil's Den, Hell's Mouth, Mt. Enoch, and Huckleberry Hill.

An 1831 map reveals the initial changes occurring in Waltham due to industrialization (Plan of the Town of Waltham). The Boston Manufacturing Company and the Waltham Bleachery and Dye Works (referred to as the “Waltham Factory”) are now clearly present, and a street has been built (River Street) connecting the two mills. The “Boston Road” (Route 20) is also shown, lined with houses (depicted as small squares) in the vicinity of the factory. Several small unnamed streets appear in the immediate vicinity of the Boston Company, foreshadowing the development of the area as Waltham’s town center. The only bridge spanning the Charles River is at Newton Street, allowing the Boston Company access to its sister plant, the Newton Chymical Company.⁸⁸ Despite incipient signs of industrialization visible on the 1831 map, most of Waltham appears untouched by the arrival of the Boston Manufacturing Company.

However, a large wall-size map created forty years after the Boston Company commenced operations indicates the extent to which the Industrial Revolution transformed the “Village of Waltham” (Clark, 1854). Surrounding the 1854 map are detailed sketches of prominent landmark buildings, including the Boston Manufacturing Company, the Waltham Bleachery, and the personal residence of company agent Ebenezer Hobbs. Like the hub of a wheel, the Boston Manufacturing Company sits at the center of the map, with development radiating in all directions. The Waltham Bleachery is visible one mile downstream, still connected to its parent company by River Street. However, the 1854 map shows that River Street is no longer the vital artery it once was, having been supplanted by the railroad, the symbol of the new industrial age, which stretches like an umbilical cord from the Boston Company to its Bleachery.

The 1854 map also shows the urbanization occurring in the area around the Boston Manufacturing Company. As Bender (1975) pointed out, the development in the area around the Boston Manufacturing Company represents the first urban-industrial

⁸⁸ On July 13, 1821, the town voted to accept P. T. Jackson’s offer to build the bridge and “give him two hundred dollars...upon the condition that he builds the bridge of good substantial materials in a good workmanlike manner not less than twenty feet wide” (Town Meeting Records, WPL, reel 5, p. 195).

social order in the United States. Dozens of streets that did not exist in 1831 are now visible, including Moody Street, named after master mechanic Paul Moody.⁸⁹ The names of new factories appear, including a foundry, machine shop, lumber yard, steam planing mill, coal yard, gas works, two chemical companies, and a furniture manufacturer. Also visible is the Waltham Improvement Company, nestled along the banks of the Charles River just upstream from the Boston Manufacturing Company. In 1854, the Improvement Company constructed a small factory to manufacture machine made watches. By 1888, this company was known as the American Waltham Watch Company and had become the largest manufacturer of watches in the world, employing 2,500 workers to manufacture up to 1,800 watch movements per day (Swinton, 1888).

Development of Civic Institutions

Civic contributions made by the Boston Manufacturing Company to the town of Waltham are also visible on the 1854 map. The “Town Common” located just north of the factory is shown as a large swath of open land in the midst of a bustling factory village. In the northeast corner of the common sits Rumford Hall, built by the company as a home for the Rumford Institute for Mutual Instruction and for the Manufacturers’ Library. A church is also visible on the Common, erected by the Boston Company in 1830 for the use of its employees. Although not labeled as such, the company’s stone schoolhouse is represented on the map as a small rectangular building located along the railroad tracks just northeast of the factory. Also shown on the 1854 map are the company’s boarding houses lining the streets in the vicinity of the mill.

⁸⁹ The fact that Waltham named a major street after a machinist reflects the community’s identification with working class values. Smaller streets are named after the wealthy merchants who founded the Boston Manufacturing Company - Francis Lowell, Patrick Jackson, and Nathan Appleton.

Population Growth

As the Boston Manufacturing Company grew, so too did Waltham's population. The decennial federal census illustrates just how quickly the town's population expanded in comparison to the state in the antebellum era:

Table 8.1

Population of Waltham and Massachusetts, 1790-1860

Year	Waltham	Massachusetts
1790	882	378,556
1800	903	422,845
1810	1014	472,040
1820	1677	523,287
1830	1857	610,408
1840	2504	737,699
1850	4464	994,514
1860	6397	1,231,066

(Vital Records, 1904, p. 3; Sutch & Carter, 2006, p. 264)

While the raw numbers, by today's standards, are not large, the rate of population growth is astounding, particularly when compared with the state as a whole:

Table 8.2

Expansion of Population: Waltham and State

Decade	Waltham	Massachusetts
1790-1800	.02%	11%
1800-1810	12%	11%
1810-1820	65%	11%
1820-1830	11%	16%
1830-1840	35%	21%
1840-1850	78%	34%
1850-1860	43%	24%

Virtually all of Waltham's population growth was concentrated in the extreme

southern part of town in the neighborhoods close to the mills. Thus, by the 1850s, Waltham was developing along two parallel tracks: a densely populated urban area in south Waltham along the Charles River, and a sparsely populated farming district in the north abutting the towns of Lexington and Lincoln (Clark, 1854).

Much of Waltham's population increase can be attributed to "socially insignificant" (Gitelman, 1974, p. 4) women and transient men who moved into town to work as mill girls and machinists at the Boston Manufacturing Company. The corporation dominated Waltham's antebellum economy, creating jobs in its mills as well as in small businesses that served the needs of the company and its operatives. In 1830, 99 out of 234 male heads of households were employed by the Boston Manufacturing Company (Gitelman, 1974). The 1850 and 1860 federal censuses provide additional evidence of the dominant role played by the Boston Company in the local economy. Many Waltham residents are listed as overseers and machinists, with entire pages filled with the names of people working as "labourers" and "factory operatives" (U.S. Federal Censuses, 1850 & 1860).⁹⁰

The Boston Manufacturing Company also transformed the ethnic and religious composition of Waltham's population. In response to shrinking profits brought on by the Panic of 1837 and overcapacity in the textile industry, the Boston Associates instituted a series of cost-cutting measures in the 1840s including executive wage cuts, speed up of machinery, suspension of dividends, and the purchase of a cheaper grade of cotton (Mailloux, 1957). According to Mailloux (1957), when the Boston Company announced a general wage cut in 1848, "most of the Waltham girls left the factory for good" (p. 214), their jobs quickly filled by Irish immigrants. By 1850, there were 163 Irish families in Waltham, the vast majority employed by the Boston Manufacturing Company (Gitelman,

⁹⁰ In the 1860 federal census, it is clear that the American Waltham Watch Company had become a major presence in Waltham. Employees of Waltham Watch were listed as "watch factory operatives," while employees of the Boston Manufacturing Company were listed as "factory operatives" or "laborers," reflecting the higher status of watchmakers in comparison to textile workers.

1974; U.S. Federal Census, 1850).⁹¹ For the town of Waltham, the arrival of Irish Catholic immigrants in the 1840s marked the end of an era. For the first time in 200 years, Waltham's population was no longer homogeneously English and Protestant.⁹²

Establishment of Public Schools and Other Educational Institutions

The impact of the Boston Manufacturing Company on Waltham's educational institutions was immense. When the company opened in 1814, there were only five district schoolhouses serving the town's children. However, over the next 50 years, new schools were constructed as a result of the increase in population brought on by the Boston Manufacturing Company. By the end of the antebellum era, there were 17 schools in Waltham housed in 11 school buildings, serving the needs of 1,047 pupils between the ages of five and 15 (Annual Report, 1860).

This study also documented the commitment made by the Boston Associates to public education in antebellum Waltham. In 1817, they built their first schoolhouse approximately 100 yards north of their mill. Just two years later, the Associates purchased the Waltham Cotton and Wool Company and took over the operation of its factory schoolhouse in what became known as the Bleachery district of Waltham. Finally, in 1837, long after the Boston Manufacturing Company had ceded leadership in the textile industry to its sister companies in Lowell, the Associates replaced their original 1817 school with a modern stone schoolhouse that the School Committee considered to be the best in town (Annual Report, 1846). In addition to constructing these schoolhouses, the Boston Associates also paid teachers' salaries and funded much of the schools' operating costs. Their generosity was applauded by the editors of the *Waltham Sentinel*, members of

⁹¹ The preponderance of Irish surnames in the 1850 federal census illustrates the rapid growth of Waltham's Irish community.

⁹² In 1831, the first Catholic church was erected in Waltham, so small that the Boston diocese considered it to be a mission church. The church was completely destroyed by fire in 1848 and not rebuilt until 1858 (Petersen, 1988).

the School Committee, local historians, and even Horace Mann (see previous chapter).

This study also documents the Boston Associates' support for adult education in antebellum Waltham. Shortly after company employees established the Rumford Institute for Mutual Instruction, the Boston Associates constructed Rumford Hall, a large, two-story building used by the institute for its meetings and weekly lectures which were open to the public. The Rumford Institute was a beloved organization in antebellum Waltham, replacing the old Puritan meeting house as the social center of the community. Prominent nineteenth century figures regularly appeared at the institute, providing mill workers and town residents with an educational experience usually reserved to those living in large cities. The Boston Associates also nurtured adult education in Waltham by establishing the Manufacturers' Library, which was given to the Rumford Institute in 1830. Among town residents, the library was an object of civic pride, praised as "one of the best things that our town can boast" (Rumford Institute, Feb. 15, 1856, p. 2).

National Changes

A New System of Manufacturing

In addition to its transformative impact on the town of Waltham, the establishment of the Boston Manufacturing Company also had major implications for the nation at large, marking the beginning of the modern factory system. Prior to 1814, American manufacturing took place in small, poorly capitalized, waterpowered mills in which the owner worked alongside his employees who were often children or entire families. In the textile industry, these "Rhode Island system" mills manufactured yarn which was then farmed out to local families to be woven into cloth (Tucker, 1984). However, as this study has shown, Francis Lowell conceptualized an entirely new system of manufacturing based on vast capital, technologically sophisticated machinery, mass production of a staple product (coarse cotton cloth), and a corporate business structure in which family

members and trusted friends purchased shares of stock in the hope of realizing capital appreciation and regular dividends. In Waltham, for the first time in the United States, and possibly in the world, all of the processes needed to turn a raw material into a finished product were performed under one roof using waterpowered machinery (Bender, 1975; Mailloux, 1957).

The fabulous success of their company encouraged the Associates to expand elsewhere. Soon even larger corporations were established in Lowell and Lawrence, and eventually throughout New England, which were patterned on the system developed by the Boston Manufacturing Company. The Boston Company became the prototype on which much of the region's large-scale, nineteenth century waterpowered textile industry was based (Steinberg, 1991). Thus, Waltham can be viewed as the parent of Lowell and Lawrence; the "testing ground" (Bender, 1975, p. 36) which determined the feasibility of expanding to sites with even greater waterpower.

Making Manufacturing Compatible with Agrarianism

Some historians (Josephson, 1949; Ware, 1931) argue that a major reason why the Boston Associates instituted a system of corporate paternalism in Waltham was to mollify parents' concerns about the effect of factory labor on their daughters' health and character. Undoubtedly, as practical businessmen, Lowell and his partners were of necessity concerned with obtaining a skilled workforce. But it is worth asking this question: Would the Associates have engaged in paternalism even if they did not have to worry about attracting workers? This study suggests that the answer is affirmative. The founders of Waltham - Francis Lowell, Patrick Jackson, and Nathan Appleton - came of age in an era of fervent patriotism, and Lowell and Jackson grew up in families with long traditions of civic involvement. Throughout their lives, all three men were committed philanthropists who generously supported a variety of civic institutions in their hometown

of Boston. The Boston Associates were, by no stretch of the imagination, crusading reformers in the mold of Robert Owen. However, they were patriotic and generous businessmen who believed that large-scale manufacturing could be introduced in the United States without the poverty and vice associated with industrialization in England. The Associates believed that manufacturing would benefit the United States by making the nation self-sufficient while providing young women with an opportunity to earn much needed money for their own and their families' needs.

But how could the Associates protect their mill community in Waltham from the potentially pernicious effects of industrialization and bring to fruition their vision of a benign manufacturing village existing harmoniously in an agrarian republic? Their solution was to employ the "well educated and virtuous" daughters of New England's farmers and provide them with "boarding houses, at the cost of the Company, under the charge of respectable women with every provision for religious worship" (Appleton, 1858, p. 16). As this study has shown, the Associates funded a variety of educational and religious institutions in Waltham that were used by both company operatives and town residents. Those who explain these benevolent actions in the context of corporate self-interest should bear in mind that the Boston Manufacturing Company supported public schools and adult education in Waltham for almost 50 years, long after the shortage of labor had disappeared with the Irish immigration and long after the initial burst of profitability had passed.

It is noteworthy that the Boston Associates aspired to create an attractive mill community in Waltham by minimizing the impact of industrialization on the environment, thereby preventing their factory village from becoming a dirty, congested mill town. Thus, the manufacturing village of Waltham was made compatible with the agrarian republic envisioned by Thomas Jefferson.⁹³ Shade trees were planted along

⁹³ Bender (1975) points out that Jefferson "felt he could prudently allow the manufacturer into his rural

company-constructed streets and a park was laid out on the land between River Street and the Charles River.⁹⁴ The company also left a large parcel of land between the factory and Main Street undeveloped except for its church, which “stands conspicuous on the green in the midst of the place” (Martineau, 1837/1966, p. 248); P. T. Jackson’s house, which was surrounded “by a huge lilac hedge, with flower and vegetable gardens;” and a row of boarding houses with “fruit trees and vegetable gardens . . . and a huge oak tree” (Armstrong & Milton, 1926, pp. 24, 27).⁹⁵

Even the mill itself, located along the Charles River in a place once known as Eden Vale, meshed nicely into the pastoral landscape, standing in sharp contrast to steam powered English textile mills with their towering smokestacks spewing heavy black smoke. Americans were quick to trumpet the benefits of waterpower, believing that the nation’s innumerable and widely diffused rivers and streams would prevent the concentration of industry in any one area, thereby preserving the Jeffersonian vision of an agrarian republic. The American Society for the Encouragement of Domestic Manufacturers (1817) argued that the “disgusting exhibitions of human depravity and wretchedness” found in England would never be replicated in America because “we have, besides, none of those great manufacturing cities; nor do we wish for such” (p. 368). The Society believed that American factories would be situated “by the fall of waters and the running stream, the seats of health and cheerfulness, where good instruction will secure the morals of the young, and good regulations will promote, in all, order, cleanliness, and the exercise of civil duties” (p. 368). The Reverend Bernard Whitman (1828), a local Unitarian minister, followed a similar line of reasoning, maintaining that the lack of waterpower in Waltham was actually a blessing for the community. In a sermon preached republic” (p. 25). Interestingly, both Jefferson and Madison supported Francis Lowell in his efforts to convince Congress to enact a protective tariff in 1816.

⁹⁴ Eventually the Boston Company constructed housing on the park (Mailloux, 1957).

⁹⁵ During the late 1800s, the Boston Manufacturing Company began selling this parcel of land to Waltham (in separate lots) to be used as a town common (Armstrong & Milton, 1926).

on Thanksgiving Day, Whitman (1828) asserted that Waltham's mills would never become "nurseries of ignorance, and vice, and wretchedness" due to the preponderance of waterfalls in New England, which would prevent "the evils of a crowded manufacturing population; because no stream is sufficiently large to warrant the erection of a great number of mills" (p. 27). In Waltham, in the early decades of the Industrial Revolution, it appeared that the Boston Associates had succeeded in making manufacturing compatible with Jeffersonian agrarianism. By employing young women as a temporary work force, by offering factory operatives and town residents educational and religious instruction, and by preserving the natural environment in the vicinity of their mill, the Associates believed they were strengthening the republic and at the same time earning a tidy profit for themselves.

Serving the Republic:

Corporate Support of Education in Antebellum Waltham

The historian searching for a single event that inspired Francis Cabot Lowell and his associates to support education in antebellum Waltham turns up empty-handed. There was no "Paul on the road to Damascus" moment when it was revealed to these shrewd businessmen that it was their obligation to fund public schools and other educational initiatives. Rather, their actions can only be understood by examining their backgrounds, life experiences, values, and beliefs in the context of the era in which they lived.

As this study has shown, Francis Lowell, Patrick Jackson, and Nathan Appleton came of age in the early years of the republic, a time of ardent patriotism and interest in the nature of government and the future of the American experiment. They were raised with the names Washington, Adams, Jefferson, and Hamilton ringing in their ears, and in the case of Lowell and Jackson, grew up in families that were personally involved in the political struggles of the era. A central tenet of the times was the belief that the survival

and stability of the American republic depended on the existence of a wise and virtuous citizenry; that without “civic virtue” the republican experiment was doomed to failure (Kennedy et al., 2006). The leaders of the post-Revolutionary War generation believed that education should help instill civic virtue in the nation’s children; in the words of Benjamin Rush, it should “convert men into republican machines” (Rush, 1786/1965, p. 17). Although there is no documentary evidence that the Associates agreed with the Founders on the primacy of education in the republic, there is also no reason to believe that their thoughts on education diverged from the prevailing wisdom of the day. Lowell, Jackson, and Appleton were conservative men not given to wild flights of fancy, and as such, would most likely have agreed that education was indispensable to the survival of the American republic.

The key to understanding why the Boston Associates agreed to fund educational institutions in antebellum Waltham lies across the Atlantic Ocean in England. There Francis Lowell and Nathan Appleton visited textile mills and recognized the potential for profit if the English system of mechanized production could be introduced in the United States. While impressed with the process of large-scale manufacturing, Lowell and Appleton were appalled by the poverty, filth, and degradation of workers they observed in English cities. Lowell commented on the “great corruption of the highest and lowest classes, and the great number of beggars and thieves” (FCL papers, MHS, folder 7.1, Jan. 2, 1811), while Appleton wrote that “for the happiness of our country” he hoped the United States would avoid industrialization (NA papers, MHS, folder 2.11, Feb. 24, 1802). Before returning to America, Lowell and Appleton (1858) discussed what they had observed, wondering what effect industrialization would have “on the character of our population.” They concluded that there was no reason “why this peculiar description of labor should vary in its effects upon character from all other occupation [*sic*]” (p. 15).

But what if Lowell and Appleton had concluded that the introduction of large-

scale manufacturing in the United States could not be accomplished without also introducing the social problems prevalent in England? This analysis indicates that they would then have returned to the United States and resumed their careers as merchants. Lowell and Appleton may have been businessmen interested in turning a profit, but they were also patriots who believed in doing right by their country. Even as a young man at Harvard, Lowell recognized that a citizen's first obligation was not to himself but to his country. In an essay on "whether it be morally right to deliver to an enemy an innocent citizen to save the republic from eminent ruin," Lowell asserted that "it is not morally right to encourage vice and discourage virtue...The best and most useful citizen must depend on being sacrificed on the first decided advantage gained by the enemy" (FCL papers, MHS, folder 1.1, n/d). It is also noteworthy that Lowell offered to sell his textile machinery, including the power loom, to American mill owners. While it is true that Lowell profited from these sales, it is also true that his decision to provide competitors with technologically advanced machinery resulted in increased competition for his own company. However, as Lowell explained in a letter to Joshua and Thomas Gilpin, "We consider ourselves not the rivals of manufacturers in this country but to foreigners" (FCL papers, MHS, folder 8.11, April 20, 1816).

In addition to their love of country, Lowell, Jackson, and Appleton were also deeply attached to their native New England. Their families' roots in the region ran deep, in each case back to the first wave of English immigrants who came ashore in the mid 1600s. Their ancestors were prominent citizens in colonial New England and supported the patriot cause in the Revolutionary War (Greenslet, 1946; Gregory, 1975; Rosenberg, 2011). In their personal correspondence and papers, Lowell and Appleton revealed their love of home. In a letter written while in England, Lowell wistfully requested that his sister send him any news from home; even news of scandal "will go down with me" (FCL papers, MHS, folder 6.9, Dec. 31, 1810), while Appleton praised the "moral purity which has

ever been a characteristic of our beloved New England” (NA papers, MHS, folder 13.10, autobiography). Their attachment to New England makes it difficult to believe that they would have introduced large-scale manufacturing in the region unless they were certain it could be done without the societal problems that accompanied industrialization in England.

***The Boston Associates and the
Democratic-Liberal Interpretation of American Education***

By establishing schools, a library, and a lyceum in Waltham, the Boston Associates believed they were fostering civic virtue and engaging in worthwhile philanthropy. They felt public schools would develop well informed citizens able to fully participate in the nation’s democratic institutions. In addition, their schools, library, and lyceum would help mitigate the harsher aspects of industrialization, thereby protecting the republic, the state, and the manufacturing village of Waltham from the poverty and corruption found in English manufacturing centers. That the Associates were also astute businessmen should not taint their generosity. There is no evidence to suggest that their support of education was used as a fig leaf to conceal their desire to make money regardless of the social costs. Such a cynical interpretation of their intentions ignores the complexity of human motivation and demeans the Associates’ almost 50-year commitment to education in Waltham. Dalzell (1987) is correct when he states that it is impossible to unravel the “tangle of motives” (p. 115) that inspired the philanthropy of the Boston Associates. We should applaud their actions while also acknowledging the multifaceted nature of their generosity.

The Boston Associates’ commitment to educational institutions in antebellum Waltham supports the democratic-liberal interpretation of the history of American education. According to this interpretation, the purpose of education was to develop well informed citizens able to participate in the American republic (Kaestle & Vinovskis,

1980; Ravitch, 1978; Siracusa, 1979). Education would also create an open society providing all Americans with equal opportunities, thereby preventing the rise of a rigid class system. As patriotic Americans, the Boston Associates believed that education would foster civic virtue among Americans of all social and economic classes.

It is significant that the Associates opened their public schools to all children living in the factory districts, and allowed all local residents to use their library and attend lectures at Rumford Hall. By adopting such an inclusive approach to the use of their educational facilities, the Associates demonstrated their commitment not only to the well-being of their company, but also to the common good. Their educational institutions helped make the community “more open, more just, and more democratic” (Ravitch, 1978, p. 9), and served as the “great equalizer of the conditions of men - the balance wheel of the social machinery” (Horace Mann, 1849, p. 59). A letter to the editor of the *Waltham Sentinel* (June 8, 1860) on the Rumford Institute reflected townspeople’s appreciation for the educational contributions of the Boston Company:

The very foundations of the Institute gives [*sic*] the negative to the oft repeated saying that “corporations have no souls.” The founder and most reliable supporter of the “Rumford” was the Boston Manufacturing Company; and this is conclusive proof that a corporation may, and does have a soul, and that soul is immortal, for so long as time shall last, and eternity may continue, the beneficent influence of the Rumford Institute will be felt and acknowledged. (p. 1)

An interesting comparison can be made between the Boston Associates and the owners of the Waltham Watch Company, which opened in 1854. By the 1860s, the Watch Company had become an extremely profitable business, and the factory continuously

expanded throughout the nineteenth century (Moore, 1945). To an even greater degree than the Boston Manufacturing Company, Waltham Watch also instituted a policy of corporate paternalism - constructing boarding houses, providing day care for the children of employees, and allowing workers the use of a company gymnasium, bowling alley, and swimming pool (Moore, 1945; Swinton, 1887). However, despite its profitability, the Watch Company made no attempt to follow the example set by the Boston Associates in supporting public education. Such a move would have seemed strangely at odds with the increasing bureaucracy and administrative centralization found in Waltham's post-Civil War school system.

***The Boston Associates and the
Revisionist Interpretation of American Education***

The mainstream revisionist critique of the democratic-liberal interpretation of American education certainly applies to some extent to historical accounts of the educational institutions established in Waltham by the Boston Associates. According to the mainstream revisionists (Bailyn, 1960; Cremin, 1965; Tyack, 1974), the democratic-liberal interpretation was excessively one-sided and optimistic, presenting education in a relentlessly positive light. The mainstream revisionists also noted that the democratic-liberal interpretation was often based on official documents and school committee reports, which did not necessarily reflect what was actually taking place in the nation's schools. In the case of Waltham, educational historians have generally ignored the town's factory schools. Any historian attempting to research the actual teaching and learning that occurred in the factory schoolhouses would be stymied by the dearth of original sources, and would of necessity have to use "top down" (Tyack, 1974, p. 9) sources such as school committee reports and other government documents.

Local historians are particularly susceptible to the charge of viewing corporate

support of education in antebellum Waltham through Panglossian eyes. None have examined the educational institutions established by the Associates in any depth, nor have they referred to the only existing account from a student perspective (Moore, 1860). Faced with a lack of original sources, local historians have touted the mere existence of the factory schools as proof that the Associates were interested in advancing civic virtue by ensuring that all children had access to the rudiments of education. The statement by Stone et. al (1893) praising the Associates for their “high purpose and grand object” (p. 57) in supporting education in Waltham typifies the reaction of local historians to the educational policies of the Boston Associates.

A more serious critique of the democratic-liberal interpretation of American education has been leveled by the “radical revisionists” (Ravitch, 1978). According to the radical interpretation, schools were designed to serve the capitalist system by preparing students for a lifetime of toil in the nation’s factories. Students would be taught obedience and develop the personal habits needed to work as productive factory operatives. According to Katz (1968), education was used as a means of social control, a way to “supply individuals with a set of inner restraints” (p. 124) that would make them efficient factory workers in the future. To the radical revisionists, the democratic-liberal notion that the purpose of education was to prepare students for citizenship and ensure class mobility was a “warm and comforting myth” (Katz, 1968, p. 1) and part of the “folklore of capitalism” (Bowles & Gintis, 1976, p. 3).

In their study of educational change in nineteenth century Massachusetts, Kaestle and Vinovskis (1980) acknowledge the connection between industrialization and the emphasis on discipline and personal responsibility in schools during the late antebellum period (1840s and 1850s). They believe, however, that there is little evidence to indicate that policy makers intended schools to teach students the work habits needed in the manufacturing sector of the economy. Rather, the authors argue that the emphasis

on discipline can be attributed to such factors as “urban disorder, Jacksonian malaise, immigration, pedagogical theories, and the bureaucratic nature of schools” (p. 44).

In line with the findings of Katz (1968) and Kaestle and Vinovskis (1980), the annual reports of the Waltham School Committee from the 1840s and 1850s often emphasized the importance of regular attendance, punctuality, discipline, and good behavior. However, there is nothing to suggest that school committee members stressed these traits in order to prepare Waltham’s children for employment in the town’s mills. An analysis of the composition of the school committee may help explain the rationale behind its thinking. Between 1842-1860, virtually all members of the school committee (fewer than 40 men) were drawn from the town’s professional class, including 12 Protestant ministers. No Irish Catholics and only one industrial worker were elected. The substantial citizens who served on the school committee were heavily vested in the community and more concerned with the rapid pace of change in Waltham than with emphasizing social control in the schools to benefit manufacturing. In language reminiscent of Thomas Jefferson, the Reverend Samuel Ripley, a member of the school committee in 1845, even stated that Waltham’s rural schools “should take higher rank” because they were “composed of children of the same rank and class in society - they are remote from the noise and temptation of the village” (Annual Report, 1845, p. 28).

The radical revisionist critique does not resonate in the case of Waltham. There is not a single reference in any archival collection (including the Boston Manufacturing Company archives, the Associates’ personal papers, local newspapers, and school committee reports) to indicate that the Boston Associates played any role in the day-to-day operation of the factory schools. In addition, even though many graduates of the factory schools were undoubtedly employed by the Boston Manufacturing Company at some point in their lives (as were many Waltham residents), there is no evidence to suggest that the schools functioned as training facilities for future factory employees.

Indeed, if the Associates wanted to psychologically prepare young people for a lifetime of factory work, why send them to school in the first place? Why not simply hire children and provide them with on-the-job training? As Kaestle and Vinovskis (1980) state, manufacturers did not need schools to inculcate good work habits in future employees since “the best place to learn productive behavior for a factory is in a factory” (p. 44). Surely a factory foreman would do a better job teaching a youngster good work habits than would a district school teacher unfamiliar with the unique nature of mill work.

The reluctance of the Associates to employ young children in their Waltham factory was noted by the company agent, Dr. Ebenezer Hobbs, who reported to the Massachusetts Board of Education that children under the age of 12 were never employed by the Boston Company and those between the ages of 12 and 15 were required to have a minimum of 20 weeks of schooling per year. Furthermore, Hobbs noted that youngsters who attended the factory schools had enjoyed successful careers in a variety of professions, and that the educational institutions established by the Boston Company had improved

the character of the population, not only of the operatives, but of the town at large. Many of the operatives that have been born in Waltham since the factories were started have, under the influence of these advantages, become overseers, superintendents or agents of mills in other portions of the country; and in other departments of life, have risen to be members of our State Legislature, members of Congress, and, in one instance, Governor of the State. (*Waltham Sentinel*, March 30, 1860, p. 2)

Although Hobbs’ position as a company employee should be considered when

reading his letter, there is no reason to question the truthfulness of his statements. When he wrote the letter in 1860, he was nearing the end of his 40-year career as agent of the Boston Manufacturing Company. The tone of Hobbs' letter is more matter-of-fact than boastful, and the substance can be verified with archival sources.

Implications

This study has a number of implications for the history of American education, for the history of the American Industrial Revolution, and for public/private educational partnerships in the twenty-first century. Among the topics that require additional research are the involvement of mill owners in public education in antebellum America, the nature of education in early mill town classrooms, the relationships that existed between corporate executives (particularly company agents) and town residents in early manufacturing towns, the full history of the Boston Manufacturing Company from 1813-1930, and the nature of public/private sector educational partnerships.

Implications for the History of American Education

Although the early years of the American Industrial Revolution have been thoroughly researched from numerous perspectives, little is known of mill owners' involvement in public education in antebellum New England. This study reveals that in Waltham, the Boston Associates funded public schools, a library, and a lyceum for almost 50 years without interfering in their day-to-day operations. The reasons for their involvement were, on the whole, altruistic - they sought to mitigate the societal impact of industrialization, and they believed that education fostered civic virtue and encouraged class mobility. In addition, the Associates were generous men who believed their wealth should be used to promote the common good. In their home town of Boston, they provided substantial financial support for such institutions as Massachusetts General

Hospital, the Boston Athenaeum, Harvard University, the Massachusetts Historical Society, and the Lowell Institute; and in Waltham, the Associates supported religious institutions, purchased a fire engine for town use, built roads, planted trees, and of course, sponsored schools, a library, and a lyceum, all open to the public (Dalzell, 1987).

Based on the success of their Waltham factory, the Boston Associates established even larger textile corporations in East Chelmsford, which was renamed Lowell in 1826. Following the pattern set in Waltham, the Associates also constructed and funded public schools in their new manufacturing village. However, the amicable relationship in regard to education that existed in Waltham between the Associates and town residents was absent in Lowell. While the Associates were praised by the Waltham School Committee for their generosity to the town, the struggle in Lowell over public school funding caused bitter feelings that festered for decades.

Very little is known of mill owners' involvement in education in other New England factory towns. Lawrence, Massachusetts, is a case in point. In 1845, two of the founders of Waltham - Nathan Appleton and Patrick Jackson - along with Abbott Lawrence, incorporated the Essex Company and began constructing the town of Lawrence halfway between Lowell and Haverhill. As was true in Waltham, the Associates actively promoted education, beginning a library and donating land for 11 public schools. However, this is where the similarities between Waltham and Lawrence end. By the 1850s, Lawrence was swamped with an influx of desperately poor Irish immigrants seeking work, and the initial educational amenities provided by the Associates were soon forgotten amidst depressing tales of poverty, disease, and violence (Cole, 1963). Why did Waltham and Lawrence develop so differently? Was the Associates' commitment to education as strong in Lawrence as it was in Waltham? And what of the other factory towns established by the Associates? Were these towns also endowed with public schools, libraries, and lyceums? And if not, why not? These are

questions in need of further research.

Another aspect of the history of American education that requires additional research is the teacher/student perspective on what took place inside factory school classrooms. This study made liberal use of James Moore's (1860) lengthy description of his time as a pupil in one of Waltham's factory schools some 40 years earlier. However, except for an occasional snippet of information in the *Waltham Sentinel*, no other teacher or student accounts of Waltham's factory schools appear to exist. An excellent source of information on Lowell's factory schools written from a teacher's perspective is an article by Joshua Merrill (1874) on "School District No. 5." Merrill describes his years as a teacher in Lowell's factory schools during the late 1820s and early 1830s, providing interesting anecdotes on teacher salaries, students, parents, and local officials. Perhaps other long-forgotten accounts of daily life inside New England's antebellum factory schools lie dormant in the collections of local historical societies or in the pages of local newspapers. If so, they would make for a fascinating study of the teacher and student perspective of education inside the factory schools, as well as fill a void in the history of American education.

Implications for the History of the American Industrial Revolution

In 1814, the Boston Manufacturing Company opened for business, thus launching the American Industrial Revolution. The novelty of the company attracted visitors from around the world, who traveled to Waltham to see the system devised by Francis Lowell which made manufacturing compatible with Jeffersonian agrarianism. The initial fame enjoyed by the Boston Manufacturing Company soon disappeared, as even larger textile corporations - the offspring of the Waltham firm - captured the nation's interest. By 1840, the significance of the Boston Company lay in the past as Waltham lost its leadership role in the textile industry to Lowell. Although hindered by a lack of waterpower, the Boston

Manufacturing Company continued to expand until 1911 and remained a major presence in New England's textile industry for over a century. In addition, for 116 years, the company was an important economic engine that drove the local economy. Even after the Civil War, when the manufacture of watches and clocks became the dominant industry in Waltham, the Boston Company and its affiliate, the Waltham Bleachery and Dye Works, provided generations of Irish, French Canadian, and Italian immigrants with steady employment (Petersen, 1988). In the early years of the twentieth century, the corporation entered a period of prolonged senescence, struggling to compete in an industry whose glory days had long since passed. Finally, in 1930, the venerable company closed its doors, its massive mills tenanted to smaller, more nimble business concerns.

Unlike residents of other mill towns who often loathed the factories which created and succored their communities, Waltham citizens have universally praised the Boston Manufacturing Company since its inception in 1814. Even the city seal, adopted in 1884 long after the bloom had left the textile industry, prominently features an engraving of the cotton mill on the top and the watch factory underneath. This study has suggested three reasons for the different reactions of Waltham and Lowell residents toward the Boston Associates - the death of Francis Lowell in 1817; the fact that Waltham, unlike Lowell, was a well established town prior to the arrival of the Associates; and the slow-moving waters of the Charles River prevented the pell-mell expansion of the textile industry that overwhelmed Lowell. However, further research on how Waltham and Lowell residents perceived the Boston Associates is needed, particularly in regard to the leadership roles assumed by company agents in factory towns. In Waltham, long-time agent Ebenezer Hobbs was heavily involved in community, even assuming an active role in the Rumford Institute and other local organizations (Warren, 1893). Rutter (1877) credited Hobbs for the amicable relationship that existed between the corporation and the town, while Warren (1893) praised him for his interest in the "moral and intellectual welfare of the

operatives and the community” (p. 8). Hobbs personified an ethical leadership style with “a strong and unswerving sense of moral purpose” (Hargreaves & Fink, 2006, p. 23) that inspired the trust of local residents. On the other hand, Kirk Boott, the “master spirit” of early Lowell, followed an autocratic, top-down, “heroics of leadership” style (Spillane, 2005, p. 143) that was resented by many Lowellians. A comparative study of Hobbs and Boott would be a welcome addition to the history of New England’s textile industry.

The full story of the Boston Manufacturing Company has yet to be told. Historians have chosen (justifiably) to focus on the corporation’s first decade in business, analyzing the significant role played by the company in launching the American Industrial Revolution (Bender, 1975; Dalzell, 1987; Dunwell, 1978; Josephson, 1949; Sobel, 1974; Ware, 1931). Even Mailloux’s (1957) study, which covers the period from 1813 through 1848, primarily emphasizes the company’s early history. Very little has been written on the experiences of the immigrant groups that followed the mill girls as employees of the Boston Manufacturing Company or the history of the company during the Civil War. Also, while a great deal is known of the Boston Company’s paternalistic policies toward factory operatives (and the town of Waltham) in the antebellum era, the story of corporate paternalism in the Gilded Age has not been researched. Finally, while the demise of New England’s textile industry in such places as Lowell, Lawrence, Holyoke, and Fall River has been carefully documented, the closing of the Boston Manufacturing Company has been overlooked. An inclusive history of the company would complete the historical record that began with such high hopes when Paul Moody’s power loom wove its first cloth in the fall of 1814.

Implications for Public/Private Partnerships in Education

Unfortunately, the example set by the Boston Manufacturing Company in supporting local educational institutions has proven to be the exception among businesses

in Waltham rather than the rule. As this study has shown, the company transformed Waltham from a quiet farming community to a bustling hive of industry and commerce. By the mid twentieth century, the prominent industries that transformed Waltham - textiles and watchmaking - had collapsed, leaving the city in the same precarious position as other once prosperous New England mill towns. However, aided by the building of Route 128, its close proximity to Boston, and strong political leadership, Waltham successfully reinvented itself as a center of innovation and technology. Today, tract housing and hundreds of businesses, large and small, have replaced the farms and factories of the nineteenth and early twentieth centuries. Even the Boston Manufacturing Company mills have been reborn as senior citizen housing. These new businesses have made Waltham a prosperous city, creating jobs for residents and filling the treasury with tax revenue. However, with a handful of exceptions, today's business owners in Waltham have little interest in the local school system. Even those that do give carefully target their contributions to specific programs.⁹⁶ This shift from a certain public spiritedness to the more insular model seen today continues the larger social shift from the preoccupation with republican virtue and social propriety in the early republic and antebellum era to the more competitive and self-interested strategies pursued by many industrialists during the Gilded Age.

In the early years of the American republic, the Latin phrase *Exitus in dubio est* - "the outcome is in doubt" - was often inscribed on the nation's currency (Daniels, 2011, p. 15). To the Founders, the inscription served as a reminder that there was no guarantee that the republic would survive. Were the American people capable of governing themselves? How could civic virtue be instilled in the hearts and minds of the nation's citizens? The Boston Associates believed, along with the Founders, that the development of a virtuous citizenry depended on education. In retrospect, we should view the Associates as practical

⁹⁶ In Waltham, a number of businesses fund scholarships for local students.

businessmen intent on earning a profit who nonetheless had a large and generous civic vision of what they wanted to achieve in Waltham.

This study has shown how a public/private educational partnership was successfully implemented in antebellum Waltham by the Boston Associates. In the context of the twenty-first century, when communities depend on government (state and increasingly federal) for educational funding, such a partnership is no longer feasible. Only the wealthiest of today's companies would have the resources to build schools and pay teachers' salaries. However, as Green (2010) points out, the financial challenges facing government make "welfare capitalism...an idea whose time has come—again" (p. 11). Perhaps school and elected officials should do more to reach out to the business community, not on the basis of self-interest but with an appeal to social responsibility and civic virtue. If successful, such an appeal would directly benefit students and help re-create the sense of shared purpose that existed between the Boston Associates and the town of Waltham two hundred years ago.

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